Washington State Department of Revenue

Core Tax System and BLS System Replacement Studies

Implementation Roadmap

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Revenue Solutions, Inc.

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1 Purpose

The Implementation Roadmap lays out the approach and plan to replace the Department of Revenue's (DOR) legacy Core Tax and Business Licensing Service (BLS) systems. Further, this Roadmap will serve as input into:

- Future funding requests;
- The Investment Plan required by the Office of the Chief Information Officer as a part of the state's project approval process; and
- Future solicitations for system replacement.

DOR's Systems Transformation and Refresh Project Steering Committee requested that the roadmap for replacing the Core Tax systems and the Business Licensing Service systems be combined into a single plan. This allows DOR to take advantage of efficiencies in hardware, software, staffing, and procurement costs to replace the systems.

This document serves as the final deliverable for both the Core Tax System Replacement Study and the Business Licensing Service System Replacement Study. The Current State Assessment, Future Vision, High-Level Requirements, and Alternative Evaluation documents for both studies are the basis for this Implementation Roadmap.

2 Document Organization

This document is divided into the following sections:

- **Section 1:** Purpose – This section describes the purpose of the deliverable and its context within the two projects.
- **Section 2:** Document Organization – This section describes the contents and organization of the document.
- **Section 3:** Executive Summary – This section describes the summary of the approach and plan to implement the preferred system replacement alternative.
- **Section 4:** Project Goals and Objectives – This section lists the goals and objectives of the replacement project.
- **Section 5:** Release Strategy and Timelines – This section describes the project release strategy and the timelines for the release.
- **Section 6:** Itemized Cost Estimates – This section describes the investment costs, maintenance costs and incremental costs.
- **Section 7:** Staffing Requirements – This section details the staffing required to implement and maintain the new system; identifying the number of resources for implementation and maintenance, timing for the resources, required competencies and the level of experience required for each skill.
- **Section 8:** System and Database Architecture – This section details the systems and data migration strategy and approach, and strategy work breakdown structure.
- **Section 9:** Hardware and Software Requirements – This section describes the required hardware and software to support the implementation of the system replacement.
- **Section 10:** Impact to DOR – This section identifies the impact to the organization as a result of replacing the BLS and Core Tax systems. This includes the impact on work processes, job content, and the impact on the organizational structure.

- **Section 11:** Impact to External Stakeholders – This section identifies the external stakeholders that will be impacted and a description of those impacts.
- **Section 12:** Business and Technical Staff Training – This section describes the business and technical staff training needs to support the implementation of the system replacement.
- **Section 13:** Risks and Mitigation Strategies – This section describes the risks with the system replacement project and the mitigation steps for those risks.
- **Section 14:** Proposed Exceptions to Policies or Technical Standards – This section describes any proposed exceptions to the OCIO policies or technical standards.
- **Section 15:** Issues to be Addressed Prior to Implementation – This section describes the issues that need to be addressed prior to implementation.
- **Section 16:** Recommended Project Management Best Practices – This section describes the recommended project management best practices.

3 Executive Summary

The Washington State Department of Revenue (DOR) is facing a challenge shared by many agencies – an inventory of legacy systems that have become increasingly hard to maintain, and are difficult to recruit and retain staff to support, and in which the end-user experience is cumbersome and time-consuming. At the same time, state leadership is looking to consolidate systems, make it easier for businesses to register and comply with their business licensing and tax obligations, and to simplify supporting the tax code. This presents the Agency with an opportunity to both modernize the technology and to improve the taxpayer and employee user experience. Replacing the current Business Licensing Service and Core Tax Systems with one that uses current architecture and technologies will:

- Ensure the Agency can continue operating in the future without significant disruption to service;
- Reduce the risk inherent in maintaining large legacy systems that rely on dated technology;
- Reduce the amount of maintenance required and associated costs;
- Ensure the Agency can implement legislatively mandated tax code changes timely and accurately;
- Allow quicker response to enhancement requests;
- Add efficiencies for business staff;
- Provide a significant Return on Investment (ROI); and,
- Make it easier and more efficient for businesses to transact business with the state.

The Core Tax and BLS Systems Replacement Study Projects have been a nine-month effort encompassing the evaluation of the Current State, charting a Future Vision, evaluating alternatives, and deriving a decision on the best alternative for the Agency. Although the DOR is expected to undergo a procurement process to obtain a qualified vendor and solution, during which vendors may propose their own implementation roadmap, this document provides the starting point to:

- Define an approach to the system replacement;
- Identify aspects of work that can occur prior to and during the procurement effort; and
- Identify the critical tasks necessary to position the Agency for success.

This Implementation Roadmap provides foundational information to support this effort, and presents and describes the steps to be taken by DOR leading up to the procurement.

Release Strategy and Timelines

The goal of the Release Strategy shown below in Figure 3-1 is to replace the BLS and Core Tax systems with minimal impact to the users and minimal creation of throwaway interfaces. In addition, although data is being incrementally moved to the replacement system, several HP NonStop mainframe systems will continue to maintain critical functions until the final Phase. Some HP NonStop mainframe systems may exist as “read-only” in order for DOR to verify information, while others will operate in a reduced capacity for smaller tax programs. Below is a summary of each release and timing. Note that Year 1 of the project represents the Pre-Planning and Procurement Phase followed by the five-year system replacement effort.

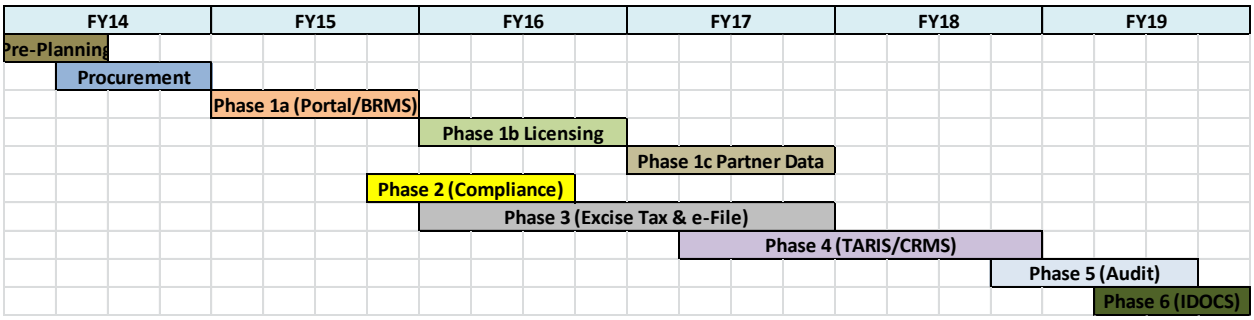

Figure 3-1: Implementation of Core Tax and BLS Systems Replacement

Itemized Project Cost Estimates

The estimated total investment cost for the Commercial Off-The-Shelf (COTS) solution to replace the BLS and Core Tax systems is $70.5 million. Table 3-1 below provides an estimated, annual project cost broken down between BLS and Core Tax cost categories. Appendix A contains a series of detailed spreadsheets that support these estimated costs.

Table 3-1: Investment Costs

Year		BLS	Core Tax	Total
1	FY14	$ 201,500	$ 604,500	$ 806,000
2	FY15	$ 4,651,027	$ 6,146,822	$ 10,797,849
3	FY16	$ 3,770,000	$ 21,799,654	$ 25,569,654
4	FY17	$ 2,112,000	$ 14,842,000	$ 16,954,000
5	FY18	$ 249,400	$ 6,504,500	$ 6,753,900
6	FY19	$ 249,400	$ 9,397,200	$ 9,646,600
Total Project		**$ 11,233,327**	**$ 59,294,676**	**$ 70,528,003**

Return on Investment

As a result of evaluating the 10-year costs and benefits of the project, the COTS solution is expected to have a Net Present Value (NPV) = $107,000,000 and yield an Internal Rate of Return (IRR) of 41.25%. Figure 3-2 below presents cumulative costs and benefits over the 10-year lifecycle and demonstrates the systems replacement is anticipated to realize a 3:1 return on investment. The detailed OCIO workbook supporting these calculations can be found in Appendix A. If the DOR should choose to include an "Early Wins" Phase in the project, the benefit stream can be accelerated, thereby increasing the 10-year total benefit and the IRR.

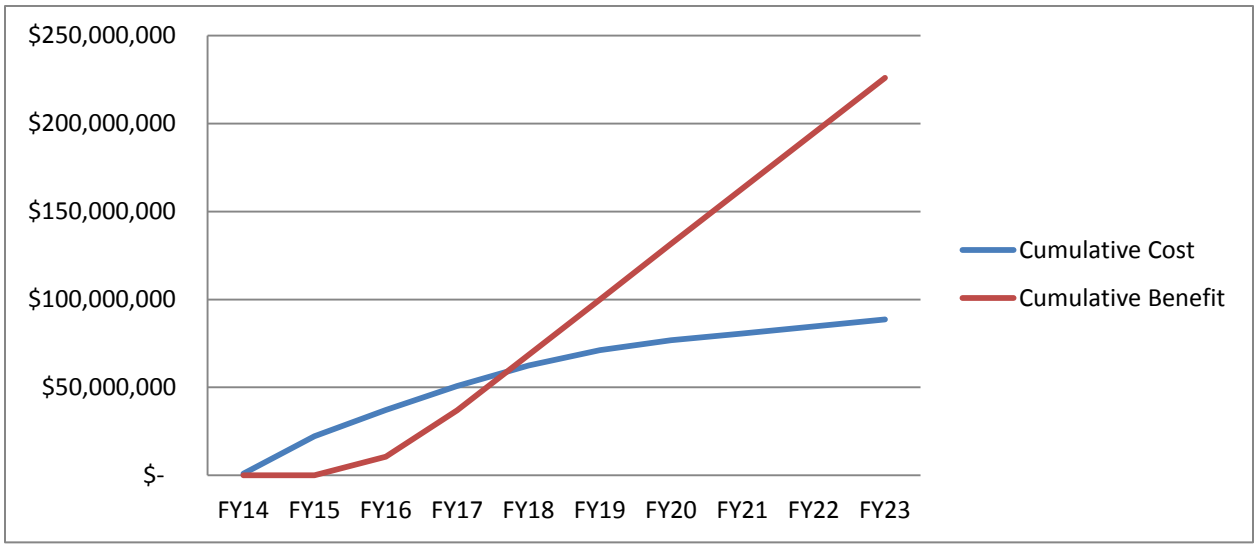

Figure 3-2: Cumulative Costs and Benefits

Project Staffing Requirements

The Core Tax and BLS Systems Replacement Project is estimated to take 400,000 hours of combined effort from DOR and vendor staff. This project will employ a variety of technical, functional, and managerial skill sets over the course of a six-year project. The project is expected to begin with an RFP development and vendor selection period. In Year 2, a core team of vendor and DOR experts will begin implementation; staffing will peak in Year 3, and then gradually ramp down to a dozen DOR support staff once the project is completed at the end of Year 6. Figure 3-3 below presents the quarterly project staffing estimates for the duration of the project. The cost detail in Appendix A contains the quarterly details for types of resources (e.g., application developer, business analyst, etc.).

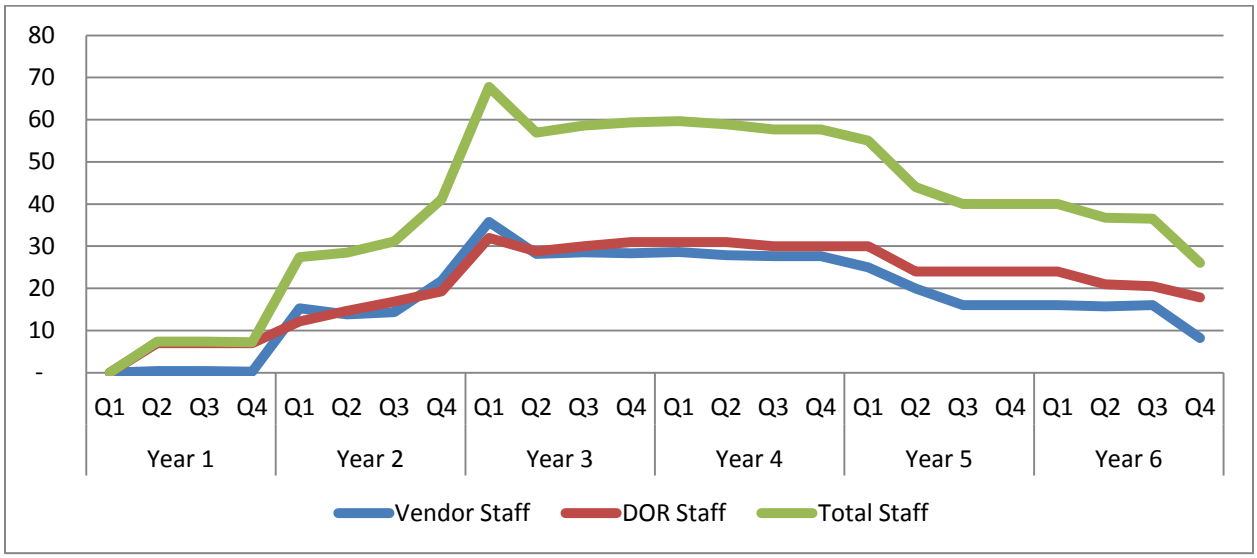

Figure 3-3: Project Staffing Estimates (FTEs)

It is essential that the DOR use the implementation project as a vehicle to prepare for full control of the solution following the implementation. Comprehensive Knowledge Transfer (KT) should be a required component of the vendor's obligation as part of the project, so that through the implementation, DOR staff becomes knowledgeable in the technologies, toolsets, infrastructure, data model, functionality, and source code. In this way, the DOR will be well positioned to be fully self-sufficient with the new application, and can take full advantage of future baseline software upgrades in a timely and efficient manner when those improvements are made available. This KT is also critical to ensuring the DOR can respond quickly to legislative changes, without heavy reliance on the vendor.

Impact to Users

The Core Tax and BLS Systems Replacement Project and implementation of the new system will have a significant impact on DOR work processes whereby many current tasks will be changed, eliminated, or reduced. Although all DOR divisions will be impacted, the divisions most affected by the change are likely to be Taxpayer Account Administration (TAA), Taxpayer Services (TPS), Compliance, and Information Services (IS).

Deploying a COTS solution for the Core Tax and BLS Systems Replacement creates a new paradigm for DOR in most business areas, including IS. Because of this, change management and Executive sponsorship and support are paramount for success. A COTS solution implementation encapsulates

history, background methodology, structure and implied process. These new and different capabilities and efficiencies provide significant opportunity and advantage for improvement, but require careful transition from the old paradigm.

Impact to External Stakeholders

Taxpayers will receive answers much quicker in the new system through an improved online services center, and as a result, taxpayer inquiries in the form of phone calls, letters and emails will decrease. In addition, information will be more accurate as it will be pulled from a single system of record. Taxpayers will have an advanced portal from which to conduct all their tax business, including initial registration, making payments and performing account maintenance. The "My Account" functionality will be expanded to provide one portal with access to both tax and registration data.

Impact to Business

The impact to the business community will include a one-stop self-service capability, with the following functionality:

- A Consolidated Statement of Account.
- The ability to file and amend returns.
- The ability to send secure electronic messages.
- An increased integrity of account information provided without delay.
- The ability to enter into an Electronic Partial Payment Agreement (EPPA) online.
- An improved front counter experience (e.g., consolidated view of an account can enable better service for the taxpayer at the point they request).
- With permissions and controls, the ability by the taxpayer or their agent to update their Tax account or licensing information online.
- The capability for more businesses to register their business and renew their business licenses online.
- An easier method to complete online information, with the ability to upload any required back up documentation.
- Access to notices and messages about an account online, which eliminates issues with businesses not receiving mailed paper notices.
- Capability to add business locations without requiring the completion of an entire Business License Application (BLA).
- The ability for business owners to confirm that the information in the system is current and accurate, make any appropriate updates, and pay new location fees online. The same process will be available for renewals, which will make these routine processes faster for business owners, DOR staff and Partner agencies.
- Resolution to the current issue of time delay in receiving paper licenses. This will be accomplished by the capability of printing the license from the account's workspace. For most business owners, all functions are envisioned to be self-service, putting the business owner in control and conducting business with the Agency when it is convenient for them.
- An easier understanding of the registration process and license obligations because of the educational information and "Wizard-like" interface available in the new system. Businesses will be able to complete their transactions faster, easier, and more accurately with the new online approach.

Impact to BLS Partners

With the expectation of attracting additional BLS Partners, the new COTS solution will also address many of the current concerns BLS Partners have with the BLS System. The anticipated positive impacts to BLS state and city Partners is as follows:

- Partners will change how they electronically receive BLS data and how they provide electronic updates and approval notifications back to the BLS System. The result of these changes will be streamlining of work processes.
- New electronic interfaces, based on current industry standards such as Web Services, will be more consistent and much easier to maintain.
- Screens used by Partners to access BLS data will be more user-friendly and much easier to read.
- Partner users will have a workspace available to conduct all of their BLS functions online. Currently, some Partners have difficulty understanding and remembering system codes. The future system will eliminate confusing codes and replace them with descriptions easily understood by the casual user. This will make training new staff on the BLS processes easier for the Partners as well as DOR's BLS staff.
- By providing change and update functions that are easily understood, Partners can eliminate the process of printing out the change notices and manually working them. Updating the BLS system with the final Partner approval is simplified and makes Partners more efficient.
- The Log on process will be less cumbersome and encourage more flexibility in accessing BLS accounts. Currently, many Partners comment that they try to avoid using the BLS system because of the difficulty logging on. In many Partner organizations, access is confined to one or two individuals because of the difficulty or limitations with the current system.
- Management information in the form of online queries will be more readily available to Partners. Currently, reports are mostly printed, which are costly and prohibit Partners from obtaining timely information that should be readily available through a BLS system screen.
- Information to Partners to help manage their business is now provided on a quarterly basis. Partner's compliance efforts will be improved because they will have the online, real-time information they need to complete a license and/or registration without delay.
- The ability for Partners to reprint different notices on-demand will be supported. This capability will provide quicker service for business owners when they do not receive mailed correspondence or as a follow-up tool for Partners when working delinquencies. In the new system, the goal will be to provide as many on-demand, self-service functions to the business owner on their account workspace as possible to eliminate cumbersome follow up, phone calls, faxes and unnecessary delay.
- The goal will be for the end-user to have fewer questions working through the BLS process and not need to call for assistance from Partners for routine questions.

4 Project Goals and Objectives

The goals of the Core Tax and BLS Systems Replacement Study Projects have been to:

- Use a proven industry accepted methodology to document DOR's current application inventory and system state.
- Identify risks and alternative approaches.
- Decide on a general solution strategy that best meets the needs of all stakeholders.
- Construct a detailed plan & financial justification for replacing the current Core Tax and BLS systems.

The primary objectives of the anticipated Core Tax and BLS Systems Replacement effort will be to:

- Ensure the Agency can continue operating in the future without significant disruption to service.
- Reduce the risk inherent in maintaining large legacy systems that rely on old technology.
- Reduce the amount of maintenance required and associated costs.
- Ensure the Agency can implement legislatively mandated tax code changes timely and accurately.
- Allow quicker response to enhancement requests.
- Add efficiencies for business staff.
- Provide a significant Return on Investment (ROI).
- Make it easier and more efficient for organizations to transact business with state and local governments.

DOR began separate Core Tax and BLS System Replacement Study initiatives in July 2012 to evaluate replacement opportunities, identify and assess alternative options, and to lay out a project approach and plan to replace the aging computer systems. As the two independent studies progressed, it was determined that to achieve efficiencies of scale in an eventual system replacement, the two evaluation projects should be combined into one. The key reasons for doing so were to eliminate duplicate data in BLS and Core Tax systems, streamline core business services needed to support constituents, and provide optimum support services needed to meet the Business, Partner, and DOR users. In addition, with systems available in the marketplace today, DOR envisions that a single, integrated data and management system will more effectively meet the needs of all stakeholders rather than 'interfacing' two separate new systems.

Based on detailed replacement alternatives evaluation for BLS and Core Tax, it was determined that a COTS approach was the preferred alternative for both system replacements. There were several reasons for this decision, but the most prevalent reasons included overall cost, risk and time to implement a new solution. The COTS solution should be the most efficient development and deployment option, as features are developed by industry experts in tax and revenue and shared amongst many other agencies. It was determined that software solutions available in this market segment are flexible and configurable with minimal customization required to meet DOR specifications, standards, policies, and tax structure.

Systems within Scope of the Core Tax and BLS Systems Replacement Study Projects:

1. Business Licensing Service Systems, including
   a. BLS mainframe (HOST)
   b. State Online Location Renewal (SOLAR)
   c. Internet Business License Application (IBLA)
   d. Internet Corporate and Limited Liability Company Renewal (ICRNL)

   e. Business Licensing Guide (BLG)
   f. Washington Licensing Information (WALI)
   g. Business License Look-up
2. Business Registration Management System (BRMS) (includes UBI issuance, and BRD)
3. My Account and Online Services
4. Excise Tax (ET)
5. Outstanding Returns File (OSR)
6. Taxpayer Accounts Receivable Integrated System (TARIS)
7. Credit Management System (CRMS)
8. Automated Compliance System (ACS)
9. Integrated Document System (IDOCS)
10. Electronic Filing System (E-file)
11. Electronic Case Management System (ECMS)
12. Audit Review System (ARS)
13. Electronic Partial Payment Agreement (EPPA)
14. Transcript System (Field Audit)

Tax Types within Scope of this Core Tax System Replacement Study:

1. B&O Tax
2. Retail Sales (state & local)
3. Use Tax (Business)
4. Consumer Use Tax
5. Public Utility Tax
6. Lodging Taxes
7. Rental Car
8. Brokered Natural Gas
9. Leaded Racing Fuel
10. Tobacco Products / Cigar (Cigarettes)
11. E-911 Tax
12. Fish Tax
13. Hazardous Substance Tax
14. Intermediate Care Facilities Tax
15. Litter Tax
16. Moist Snuff
17. Motor Vehicle Sales/Leases
18. Petroleum Products Tax
19. Refuse Collection Tax
20. Solid Fuel Burning Devise Fee
21. Spirits Taxes
22. Syrup Tax
23. Tire Fee
24. Oil Spill

Functionality in Scope:

1. Business Functions
   a. Registration
   b. Licensing (plus renewal and account management)
   c. Taxpayer Accounting
   d. Returns/Application Processing
   e. Cash Management

   f. Taxpayer Accounting
   g. Revenue Accounting
   h. Audit
   i. Compliance
2. Core Services
   a. Security
   b. Payment
   c. Correspondence Management
   d. Business Rules
   e. Reports
   f. Document Management
   g. Validation Rules
   h. Verification
   i. Data Exchanges

Out of Scope:

1. Decommissioning of legacy systems for non-mainstream taxes. These tax types, and their supporting systems, will be evaluated and considered/prioritized for replacement as part of the Core Tax and BLS Systems Replacement Project. As functionality is moved to the COTS solution, the DOR and vendor will determine how to address details of implementing non-mainstream taxes. A better approach may be to incorporate the implementation of a non-mainstream tax type along with a core tax type, rather than keep the legacy system operational.

The vision of the DOR is to implement one new, comprehensive solution that provides both Core Tax and BLS functionality (core support services and system functionality). Because there is a significant amount of overlap in the current (separate) system functionality, it makes sense to target a single data architecture and leverage one solution. A summary of the major systems and shared functionality are represented in Figure 4-1 below. This table summarizes an important data point for the decision to combine the two projects.

Services	BLS	BRMS	Compliance	ET/E-file	TARIS	CRMS	Audit	IDOCS
Business Services								
Registration	x	x						
Returns/Application Processing	x			x				
Cash Management	x			x				
Taxpayer Accounting	x		x	x	x	x	x	
Revenue Accounting	x				x	x		
Compliance	x		x		x		x	
Core Services								
Security	x	x	x	x	x	x	x	
Receipts	x			x	x			
Correspondence Management	x		x	x			x	x
Business Rules	x	x	x	x	x	x	x	
Reports	x	x	x	x	x	x	x	
Document Management	x			x			x	x
Validation Rules	x	x		x	x	x	x	
Verification	x	x		x	x	x	x	
Data Exchange	x	x	x	x	x	x	x	x

Figure 4-1: Core Tax and BLS Replacement Systems and Shared Functionality

5 Release Strategy and Timelines

This section describes the suggested project release strategy, tasks to be performed and functionality to be delivered in each Phase, timelines for the releases, and dependencies on legacy BLS and/or Core Tax systems. There are multiple dependencies in both system and data that come into play as it relates to this release strategy.

The goal of the Release Strategy shown below in Figure 5-1 is to replace BLS and Core Tax with minimal impact to the users and minimal creation of throwaway interfaces. In addition, although data is being incrementally moved to the replacement system, several HP NonStop mainframe systems will continue to maintain critical functions until the final Phase. Some HP NonStop Mainframe systems may exist as "read only" in order for DOR to verify information, while others will operate in a reduced capacity for smaller tax programs. Below is a summary of each release. Note that Year 1 of the project represents the Pre-Planning and Procurement Phase followed by the five-year system replacement effort.

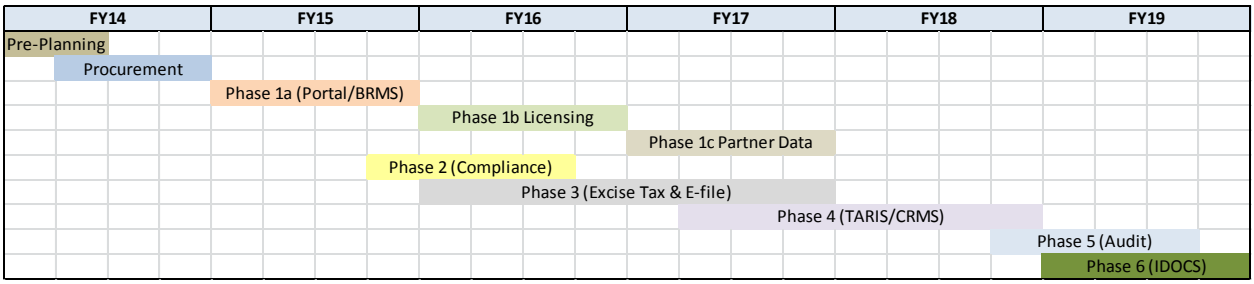

Figure 5-1: Implementation of Core Tax and BLS Systems Replacement

As functionality is moved to the COTS solution, the DOR and vendor will determine how to address details of implementing non-mainstream taxes. A better approach, may be to incorporate the implementation of a non-mainstream tax type along with a core tax type, rather than keep the legacy system operational. The DOR will determine, during pre-launch planning, how best to incorporate the non-mainstream taxes and systems as part of the project.

Work Breakdown Structure

This Work Breakdown Structure illustrates the primary work associated with the Core Tax and BLS Systems Replacement Project. Initial architecture work should be completed to maximize the quality of the solution and minimize risks to project success. Significant data integration work, as well as detailed business rules discovery and extraction, would be best accomplished prior and leading up to the initial Phase of the COTS installation. Best practice does not leave this work entirely to the COTS vendor when valuable application, system and IS skills are available in the DOR.

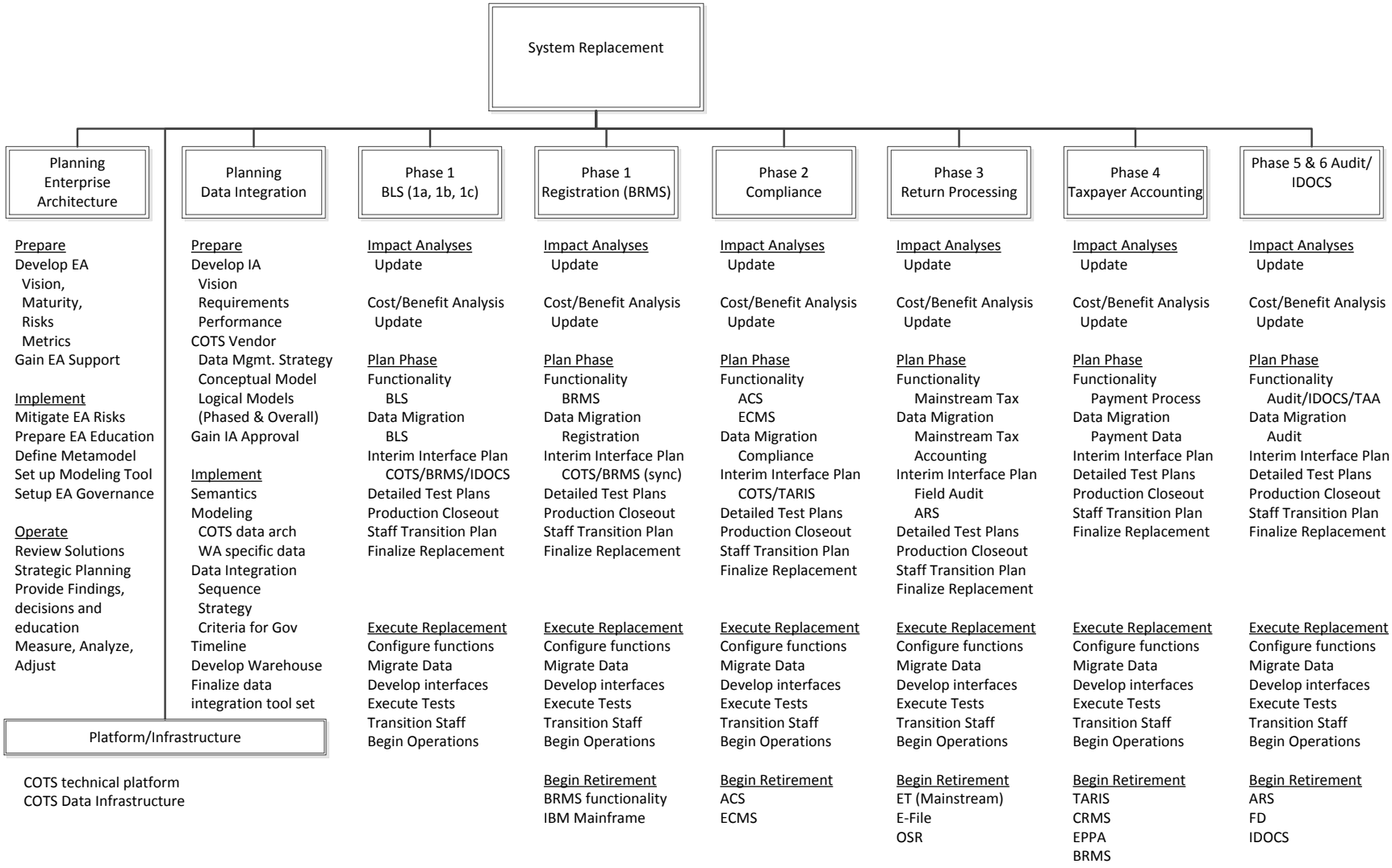

Figure 5-2: Core Tax and BLS Systems Replacement Work Break Down Structure

The associated work sequence for the Core Tax and BLS Systems Replacement initiative is critical to the success of the effort from both a cost and quality of service perspective. Formulating a foundational architecture (detailed description and specification) of both the current state and future state will assist with the initiation of the overall project. The completeness of architecture prior to the engagement of a COTS solution provider will result in improved return on investment, better control of scope of work, and reduction of costly change orders. Just as important, quality of service during the phases of development comes from careful preparation. Risk mitigation strategies that are carefully planned and communicated will prevent issues related to processing capabilities, fund distribution and compliance management during transition periods.

Figure 5-3 below presents an overview of the current Core Tax and BLS Systems Architecture. Of importance to note is the "stovepipe" nature of the applications and lack of a single, integrated data architecture.

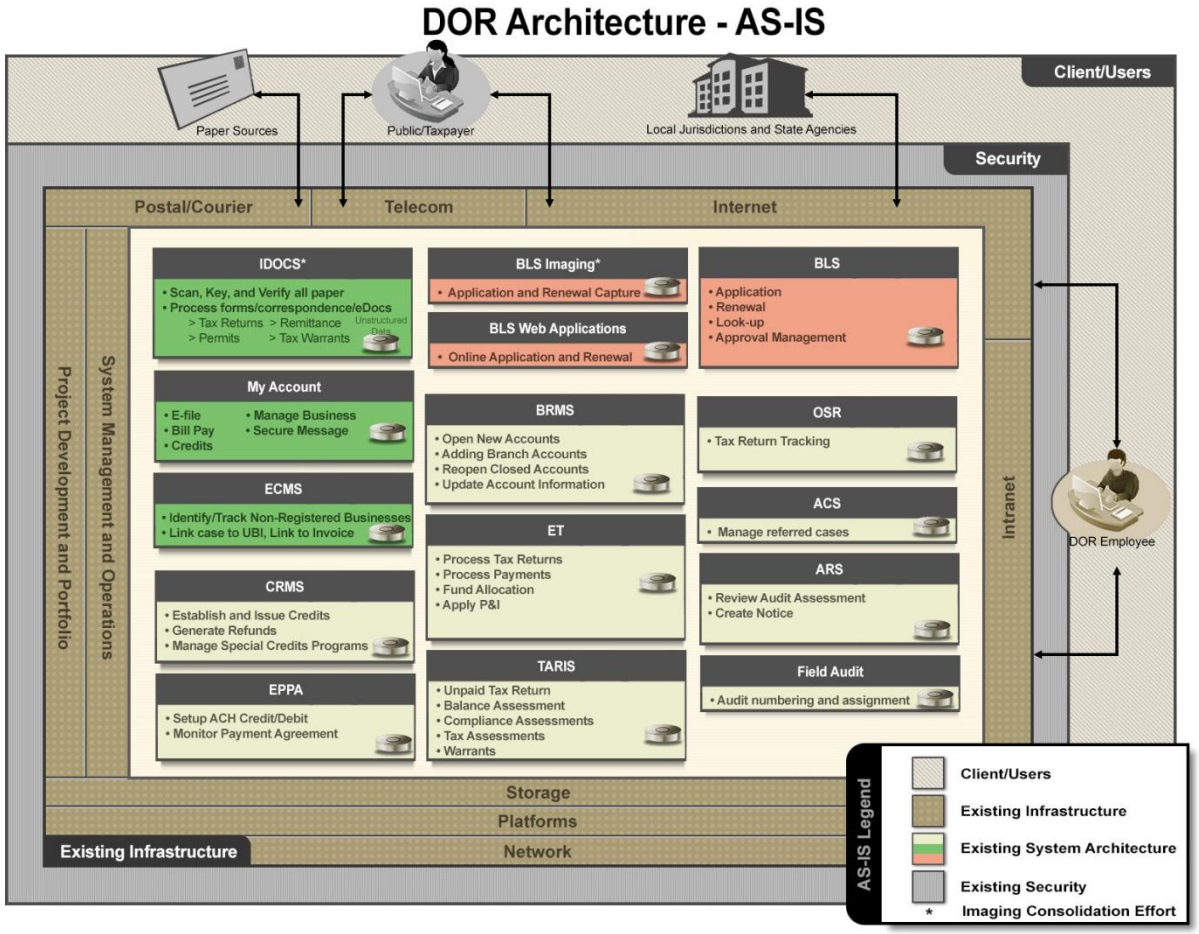

Figure 5-3: Core Tax and BLS Systems Replacement Current State

5.1.1 Implementation Approach

Throughout the Core Tax and BLS Systems Replacement Project there must be a clear emphasis on managing the interconnections between legacy systems and maintaining integrity with the new

environment. The proposed phased approach, work break down structure, and migration approach reduces the impact and issues by considering the following integration principles:

1. Complete the comprehensive data architecture, management strategy, and conceptual model prior to Phase 1(BLS & BRMS replacement).
2. Limit the duration of any interim interface between the legacy Core Tax System and COTS solution.
3. Establish clear criteria for all data conversion from legacy systems to the COTS solution (i.e. active plus three years, retention schedule, and mainstream/non-mainstream).
4. Use synchronization between BRMS and the COTS solution to achieve a read-only status to BRMS as early in the project as possible.
5. Consider the COTS solution as the system of record for any/all data once integrated. Data on IBM or HP NonStop mainframe may be kept available as read-only, once it is migrated to the new solution. (For instance, many legacy systems rely heavily on BRMS. Under this principle, BRMS data will be kept in sync with the COTS updates until such time that the legacy systems and/or BRMS are fully replaced.)
6. Eliminate mainstream tax processing dependence on existing systems as soon as possible.

Table 5-1 below highlights the suggested implementation approach by Project Phase, with major functionality released and implemented in measurable increments. Each phase aligns to a target timeline on the project roadmap.

Table 5-1: Implementation Approach by Phase

Phase	Tasks Performed / Functionality Deployed	Duration	Dependencies
Pre-Planning Phase	• Gather Existing Inventories of Work Items • Inventory Reports (source data, system, purpose, content, frequency, users) • Obtain copies of all Correspondence (source data, system, content, purpose, auto vs. manual) • Document Interfaces (systems, content, key business rules, frequency) • Assess legacy system data and define conversion expectations • Harvest/document existing business rules • Document Functional and Technical Requirements • Perform Outreach to Agencies • Consider agency site visits to other Department of Revenue agencies	6 months	Available resources

Phase	Tasks Performed / Functionality Deployed	Duration	Dependencies
Procurement Phase	• Gather Requirements • Develop Request for Proposal (RFP) • Release RFP • Receive and Review Responses • Conduct Vendor Demos/Orals • Award and Contract	9 months	• Budget approval • Legal approval • Procurement approval

Phase 1a – Portal Replacement, Master Data, BRMS	• Integrate BLS registration and licensing processes into web-enabled COTS solution Portal.
	  ○ Implement wizard to support applications, renewals, and updates.
	  ○ Replace IBLA, SOLAR, ICRNL, and BLG/WALI.
	  ○ Deploy business rules for all licenses administered through BLS.
	• Develop a temporary interface between these new web licensing functions and the legacy mainframe back-end.
	• Integrate tax registration processes into new BLS (currently managed by BRMS in TAA).
	• Provide BLS customer service to support education. This is intended as an outreach function (a variety of forums) to support the taxpayer learning & becoming proficient on the use of the new Portal.
	Note: With the exception of tax registrations, BLS operators and Partners will continue to operate through the IBM mainframe for their licensing transactions.
		12 months	• BRMS will remain read-only after this Phase is complete.
			• Data cleansing is required to combine BRMS and BLS data in the new system.
			• IDOCS interfaces with new solution for registration.
			• There are also BRMS registration processes done online today from the Consumer Use Tax and Jenkins Tax applications. DOR needs to consider how those would work.

Phase	Tasks Performed / Functionality Deployed	Duration	Dependencies
Phase 1b – Licensing Back-end	• Deploy and integrate a new back-end subsystem with the product licensing portal. • Release business license processing to support filing, Partner license approvals (see also last bullet this section), maintenance, renewals, and closure. • Install business license accounting to support cashiering, reconciliation, credit card charge billings to Partners, accounting adjustments, credits and debits, and distributions. • Provide business license customer service to support education, correspondence, and Partner relations. Additional back end processing will provide information to assist with educating partners on the use of the new BLS system. • Integrate core support services for security, payments/refunds, document management, data exchange, and reporting. • Implement all Partner licenses, (note Partners with complex regulatory functions will continue to access those regulatory functions through the legacy system until Phase 1c completion – the legacy system will continue to receive data updates until 1c is complete).	12 months	• Some Partner-specific data may remain on legacy BLS until next Phase. • Interfaces to OFM's Agency Financial Reporting System (AFRS) and the State Treasurer's Treasury Management System (TM$) will be needed.
Phase 1c – Partner Data	• Provide minor updates to business license portal and wizard. • Implement updates to Partner business license processing and new functionality to support BLS regulatory functions. • Provide minor updates to business license accounting and customer service, as required by the final phasing of Partner data.	12 months	• None.

Phase	Tasks Performed / Functionality Deployed	Duration	Dependencies
Phase 2 – Compliance	• Move ACS and ECMS functionality to the new solution. Create an interim interface between TARIS and COTS to work receivables including needs for Revenue Accounting. • Create an interim interface between OSR and COTS to work outstanding returns. • Prove out additional capabilities around case management, workflow, business rules, and correspondence. • Integration with Avaya Predictive Dialer.	12 months	• Interim interface between TARIS and COTS. • Interfaces to OFM's Agency Financial Reporting System (AFRS) and the State Treasurer's Treasury Management System (TM$) may be needed, depending on the content and functionality in the TARIS interface. • Interim interface from OSR to COTS. • IDOCS interfaces with new solution for correspondence. • Tax Discovery will continue using Audit 2000 and ARS outside of the COTS until Phase 5. • Note: Need to consider Closing agreements, Access databases, E-Withhold, and NOWD.

Phase	Tasks Performed / Functionality Deployed	Duration	Dependencies

Phase 3 – Excise Tax and E-file OSR	• Conversion of Excise Tax.
	• Conversion of E-file.
	• Conversion of OSR.
	• Focus implementation on tax processing, business rules, penalty and interest.
	• Phase the deployment by Filing Frequency or some other defined subset of the population to help regulate volumes and manage risk during rollout. For example:
	  ○ Monthly Filers
	  ○ Quarterly Filers
	  ○ Annual Filers
		24 months	• Interim interface to TARIS and CRMS will need to be created.
			• Interim interface to Forest Tax needed for Forest Tax return OSRs.
			• IDOCS interfaces with new solution for returns filing.
			• Need to determine how Excise Tax processes non-mainstream tax payments.
			• Need to consider Streamline Sales Tax implications.

Phase 4 – Taxpayer Accounting (TARIS & CRMS) Revenue Accounting	• Conversion of TARIS. • Conversion of CRMS (for both Credits on the Return and Special Programs). • Implementation of all taxpayer accounting functionality for Excise Tax. • Implementation of Revenue Accounting functionality. • Focus on taxpayer accounting, billing, business rules, penalty and interest, including the Special Credit Programs.	21 months	• Interim interface from ET is removed. • Interim interface from TARIS to support Collections removed. • ARS capability added to post assessments and refunds. • Note: Forest Tax needs to be assessed when TARIS replacement is assessed to determine impact.

Phase	Tasks Performed / Functionality Deployed	Duration	Dependencies
Phase 5 – Audit	• Conversion of Transcript (FD). • Conversion of ARS. • Move all audit assignment and case management functionality to new solution. • Retire TATS (Tax Assessment Tracking System).	12 months	• Interim interface from ARS goes away. • Note: Need to consider how analytics component will access warehouse data.
Phase 6 – IDOCS	• Replacement of imaging input and support solution.	9 months	• Existing interfaces to COTS solution replaced with new solution.

This "Functional Phasing" deployment methodology can be used to accelerate the implementation of tangible system functionality and demonstrate early success for the project. For BLS, this would be a three-phase approach, represented in the roadmap, which begins with the targeted portal and wizard functionality that would be used by businesses, followed by back-end processing and complex Partner regulatory processing. Businesses would have new licensing processes within 9-12 months that integrate with the existing BLS back-end processing. License application and online renewal functionality would be available in Phase 1a.

Note that Phase 1a will require temporary interfaces to the existing BLS and BRMS systems.

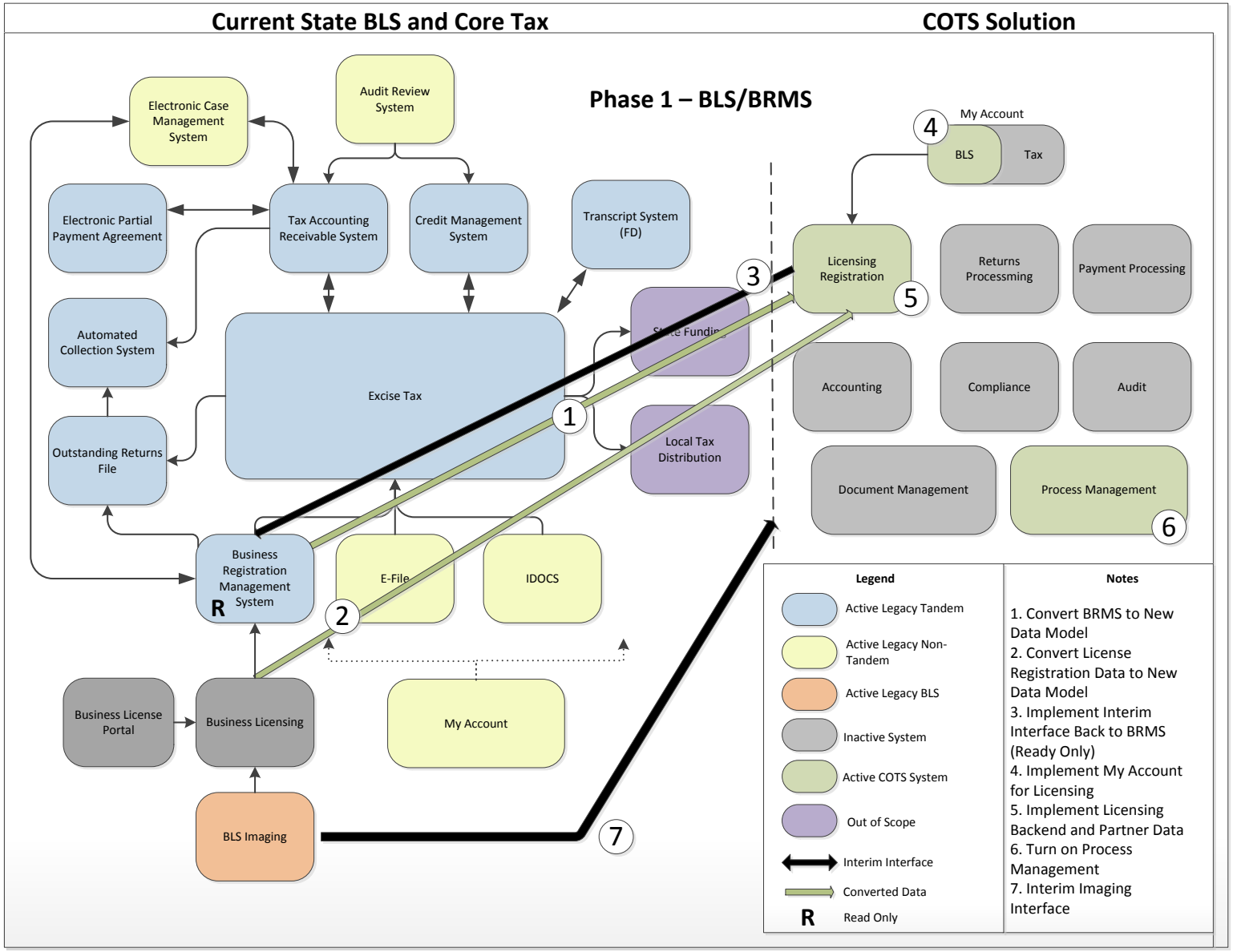

Figure 5-4: Phase 1: BLS and BRMS

As summarized in Figure 5-4 above, Phase 1a moves Business Licensing processing to the new solution by enabling these core functions (Note: circled items in the graphic above correspond to the description of release functions below):

1. Convert BRMS to New Data Model
2. Convert License Registration Data to New Data Model
3. Implement Interim Interface Back to BRMS (Ready-Only)
4. Implement My Account for Licensing
5. Implement Licensing Back-end and Partner Data
6. Turn on Process Management
7. Implement an Interim Imaging Interface to IDOCS

Phase 1a: Business License Application Portal/Wizard, Registration Data, and BRMS

This Phase is a 9- 12-month effort resulting in the following:

- Business web portal with wizard to support applications, renewals, annual reports, license issuance and updates.
- Replacement of IBLA, SOLAR, ICRNL, License Look-Up and BLG/WALI.
- Integration of the existing BRMS and BLS systems.
- Business license customer service to support licensee education on the use of the new Portal.
- Imaging (IDOCS) interfaces with new solution for registration.

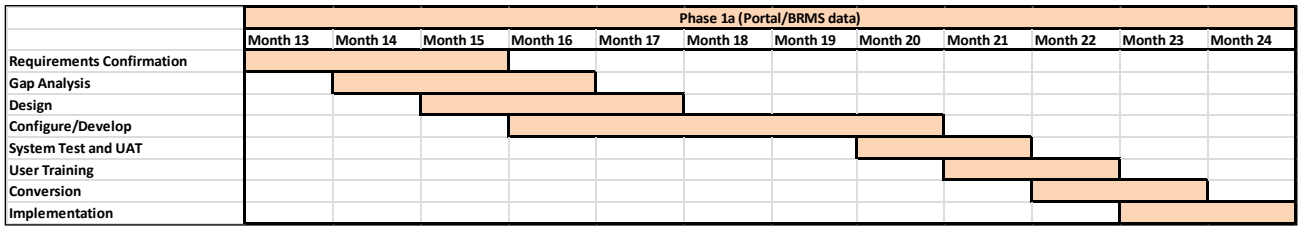

Figure 5-5: Phase 1 BLS and BRMS Timing

Key activities for this Phase include the following:

1. Project Management – to be initiated in Phase 1a, then continue throughout all project phases
    a. Project management plan – project charter, work plan, communications, roles and responsibilities, risk and issue management, change management, identification and evaluation of internal controls improvement opportunities
    b. Management reporting and monitoring
2. Readiness
    a. Validate requirements and COTS capabilities and conduct gap analysis
    b. Develop Conceptual Architecture for Master Index, Wizard, Interfaces
    c. Conduct knowledge transfer of COTS functionality and administration to DOR team
3. COTS Framework
    a. Define hardware and software infrastructure and procure as needed
    b. Establish development and testing/training environment
    c. Establish production environment
4. Establish Master Index
    a. Define integration with existing BRMS and BLS database

   b. Define integration with Secretary of State (SOS) database as needed
   c. Develop and test BRMS, BLS, and SOS interfaces
5. Portal/Wizard Development
   a. Design licensing guide business rules and workflows
   b. Configure application wizard
   c. Develop customizations as needed
   d. Test Portal/Wizard
   e. Update and provide documentation
   f. Conduct knowledge transfer of project-specific functionality
6. Integrate BLS, BRMS, and Core Support Services
   a. Design, develop, test BLS functions as needed
   b. Design, develop, test BRMS functions as needed
   c. Integrate application and database security with DOR
   d. Integrate DOR payment services with product (assumes standard payment processing across BLS and Core Tax)
7. Implementation
   a. Implement communication plan for impacted stakeholders (businesses and Partners)
   b. Conduct training for Partners and BLS staff
   c. Create user roles and security
   d. Conduct User Acceptance Testing
   e. Go Live

Phase 1b: Back-end Processing

This Phase is a 12-month effort resulting in the following:

- Integration with product licensing portal.
- Business license processing to support filing, Partner license approval, maintenance, renewals, and closure.
- Business license accounting to support cashiering, reconciliation, credit card charges billings to Partners, accounting adjustments, credits and debits, and distributions.
- Business license customer service to support education, correspondence, and Partner relations.
- Integration with core support services for security, payments, document management, data exchange, and reporting.
- Implementation of all Partners' license, both state agencies and cities.

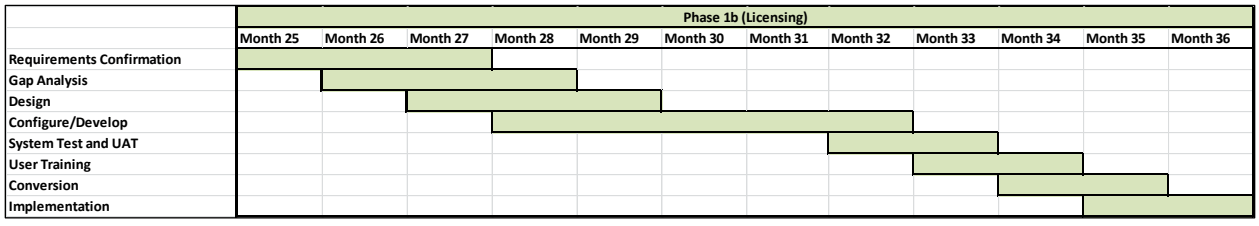

Figure 5-6: Phase 1b Backend Processing Timing

Key activities for this Phase include the following:

1. Project Management –initiated in Phase 1a, and continued in this phase
    a. Routine Controlling Activity – work plan, communications, roles and responsibilities, risk and issue management, change management, identification and evaluation of internal controls improvement opportunities
    b. Management reporting and monitoring
2. Readiness
    a. Validate requirements and COTS capabilities and conduct gap analysis addressing any recommended changes from Phase 1a
    b. Update project management plan as needed
3. Portal/Wizard Integration
    a. Design integration with back end
    b. Configure application wizard
    c. Develop customizations
    d. Test Portal/Wizard
    e. Update and provide documentation
    f. Conduct knowledge transfer of project-specific functionality
4. License Processing and Accounting Capability Configuration
    a. Define processes and rules through conference room pilots
    b. Configure core processing and accounting rules; include financial controls as required
    c. Test processing and accounting functions
5. Integrate Core Support Services
    a. Integrate application and database security with DOR
    b. Integrate DOR document management services with product
    c. Integrate DOR payment/receipting services (e.g., cash management and receipting) with COTS application (assumes standard payment/receipt processing across BLS and Core Tax)
    d. Establish data exchange services for sharing data with Partners
    e. Establish reporting environment within product and design, develop, and test reports
    f. Establish correspondence environment within product and design, develop, and test correspondence
6. Implementation
    a. User Acceptance Testing
    b. Conversion
        i. Develop conversion plan
        ii. Design, develop, test conversion programs (using product tools as available)
        iii. Convert Partner data
    c. Implement communication plan for impacted stakeholders (businesses and Partners)
    d. Conduct training for Partners and BLS staff
    e. Create user roles and security
    f. Go Live

Phase 1c: Complex Regulatory Partner Processing

This Phase is a 9- 12-month effort resulting in the following:

- Integration of complex regulatory Partner functionality necessary to support current state BLS functionality.
- Minor updates to business license portal and wizard.
- Minor updates to business license accounting and customer service.

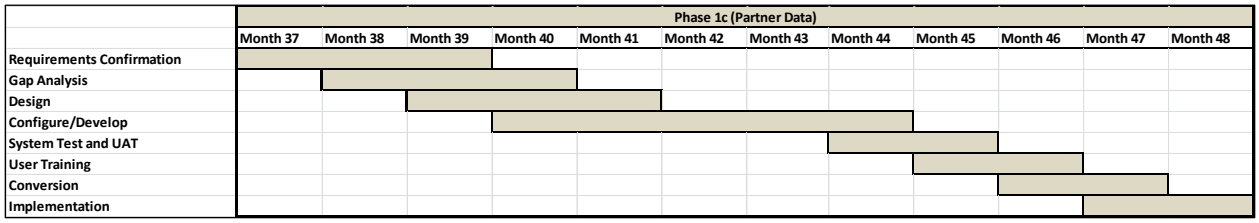

Figure 5-7: Phase 1c Complex Regulatory Partner Processing Timing

Key activities for this Phase include the following:

1. Project Management –initiated in Phase 1a, and continued in this phase
    a. Routine Controlling Activity – work plan, communications, roles and responsibilities, risk and issue management, change management, identification and evaluation of internal controls improvement opportunities
    b. Management reporting and monitoring
2. Readiness
    a. Define Phase 1c group
    b. Validate requirements and COTS capabilities and conduct gap analysis addressing any regulatory and Partner-specific data needs
    c. Update project management plan as needed
3. Portal/Wizard Development
    a. Design licensing guide business rules and workflows for Partners and regulatory needs
    b. Configure application wizard
    c. Develop customizations as needed
    d. Test Portal/Wizard
    e. Update and provide documentation
    f. Conduct knowledge transfer of project-specific functionality
4. Processing and Accounting Development
    a. Define new Partner regulatory processes and rules through conference room pilots
    b. Configure core processing and accounting rules that may change due to the new Partner regulatory processes; include financial controls as required
    c. Test processing and accounting functions
5. Integrate Core Support Services
    a. Update security, document management, and payment service integration as necessary
    b. Establish or update reports and correspondence as necessary for new Partners
6. Implementation
    a. User Acceptance Testing
    b. Conversion
    c. Implement communication plan for impacted stakeholders (businesses and Partners)
    d. Conduct training for Partners and BLS staff
    e. Create user roles and security
    f. Go Live

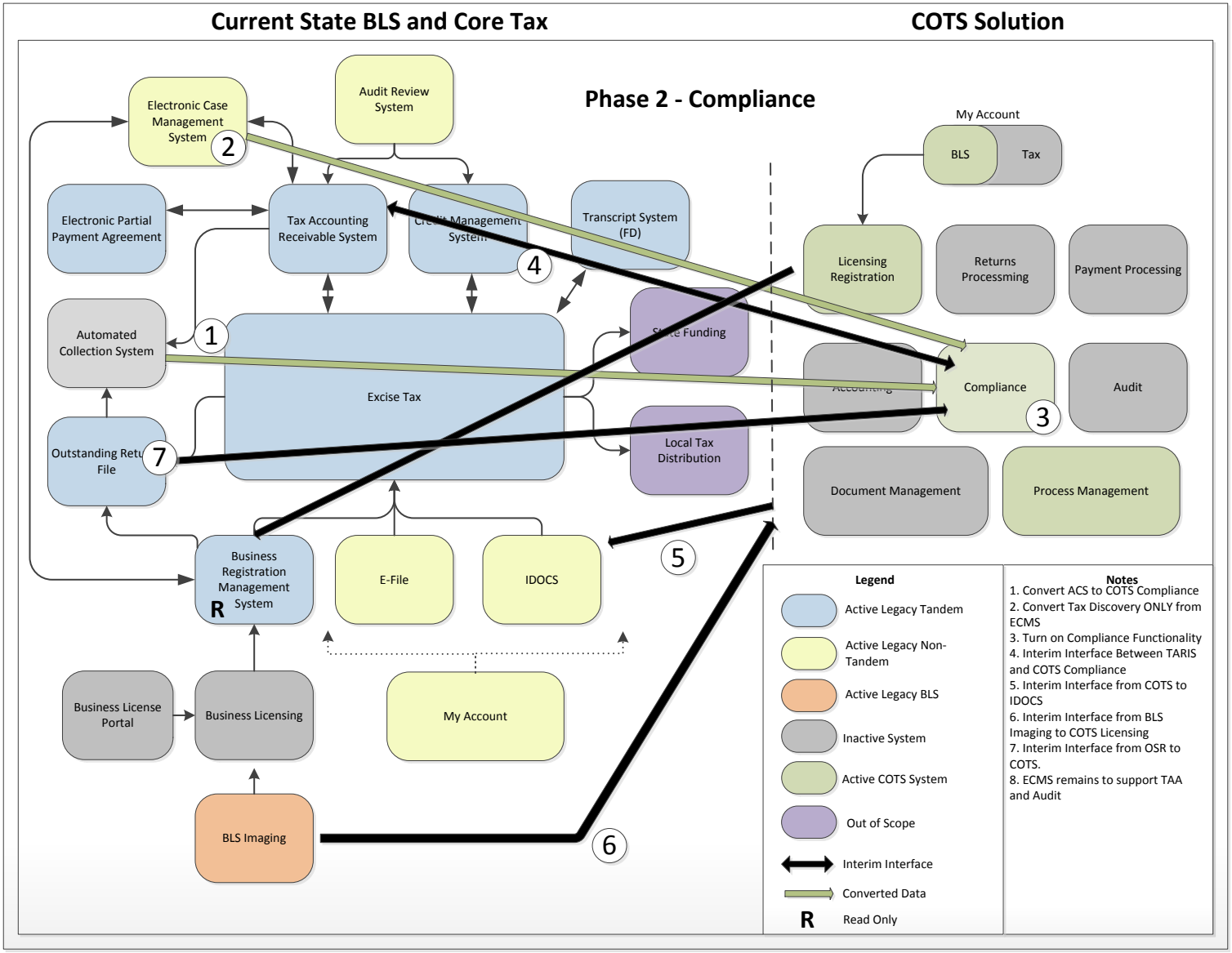

Figure 5-8: Phase 2 Compliance

This Phase is a 12-month effort resulting in the following:

Moving ACS and ECMS capabilities to the new solution, while continuing to maintain ECMS to support TAA and Audit:

1) Convert ACS to COTS Compliance
2) Convert Tax Discovery ONLY from ECMS
3) Turn on Compliance Functionality
4) Implement Interim Interfaces between TARIS (including EPPA) and new COTS Compliance system
5) Implement Interim Interface from COTS to IDOCS
6) Implement Interim Interface from BLS Imaging to COTS Licensing
7) Implement an Interim Interface from OSR to COTS

In addition:

a. Proving out additional capabilities around case, workflow business rules, and correspondence
b. Installing an IDOCS interface with the new solution for document storage and retrieval
c. Integration with Avaya Predictive Dialer
d. May need to consider multiple interfaces for the following systems: FD, CR , ET, DW, Forest tax

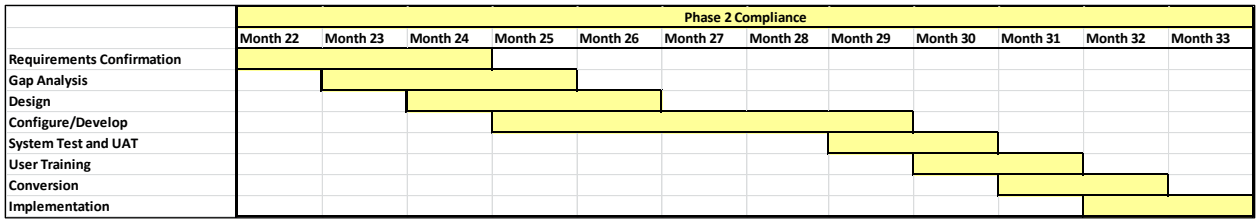

Figure 5-9: Phase 2 Compliance Timing

Key activities for this Phase include the following:

1. Project Management –initiated in Phase 1a, and continued in this phase
    a. Routine Controlling Activity – work plan, communications, roles and responsibilities, risk and issue management, change management, identification and evaluation of internal controls improvement opportunities
    b. Management reporting and monitoring
2. Readiness
    a. Validate requirements and COTS capabilities and conduct gap analysis addressing any recommended changes
    b. Update project management plan as needed
3. Design and Development
    a. Design integration with TARIS
    b. Design integration with OSR
    c. Design integration with EPPA, Forest Tax, DW, ET, CR
    d. Configure application
    e. Develop customizations as needed
    f. Unit, System, and UAT Test
    g. Update and provide documentation
    h. Conduct knowledge transfer of project-specific functionality
4. Integrate Core Support Services
    a. Integrate application and database security with DOR

b. Integrate DOR document management services with COTS product
c. Integrate DOR payment services with COTS product
d. Establish reporting needs within COTS product and design, develop and test reports
e. Establish correspondence needs within COTS product and design, develop and test correspondence module

5. Implementation
    a. Conversion
        i. Develop conversion plan
        ii. Design, develop, test conversion programs (using product tools as available)
        iii. Convert data
    b. Implement communication plan for impacted stakeholders
    c. Conduct training for staff
    d. Create user roles and security
    e. Go Live

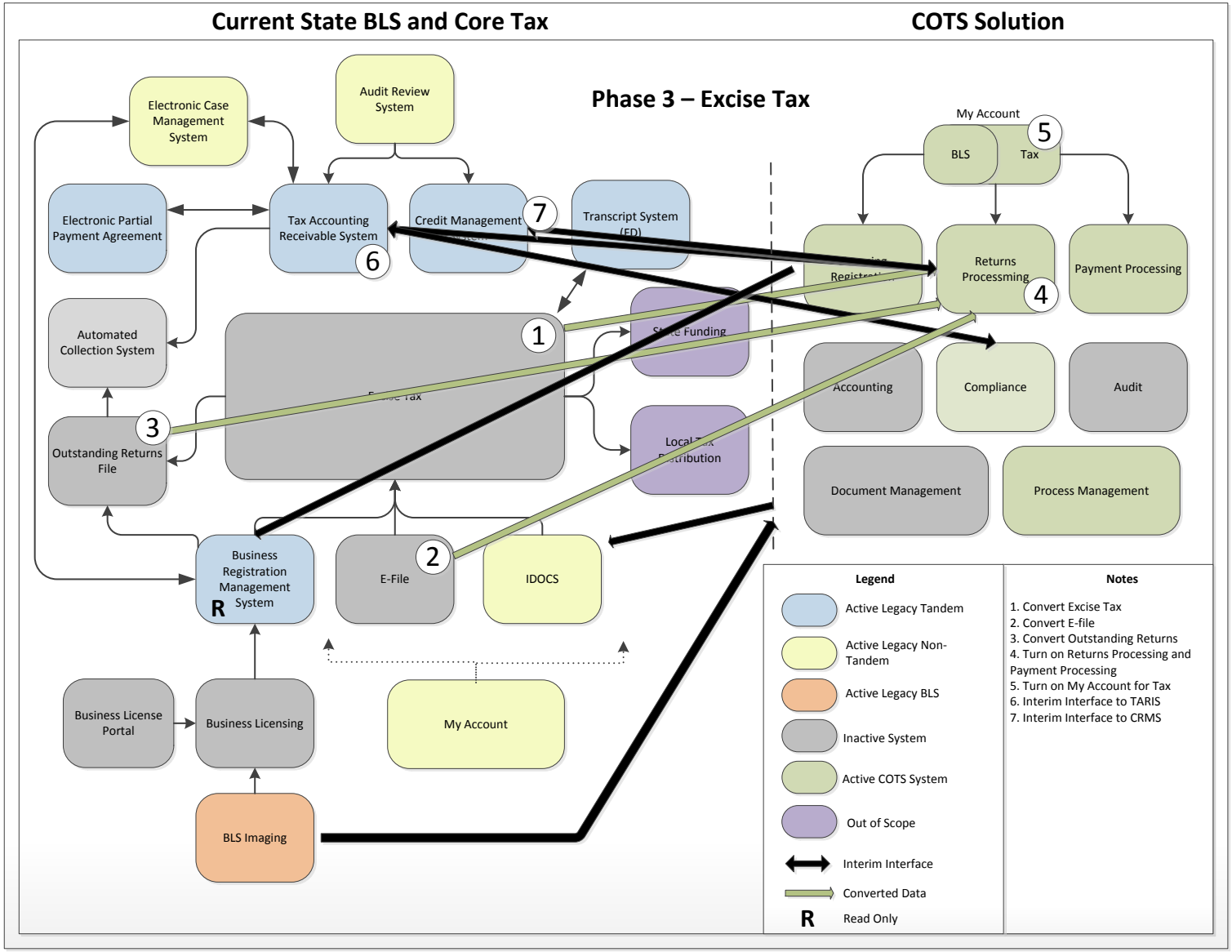

Figure 5-10: Phase 3 Excise Tax, OSR and E-file

This Phase is a 24-month effort resulting in the following: Moving all Excise Tax, E-file, and OSR capabilities to the new solution:

1. Convert Excise Tax
2. Convert E-file
3. Convert Outstanding Returns
4. Turn on Returns Processing and Payment Processing
5. Turn on My Account for all core tax types
6. Provide an Interim Interface to TARIS
7. Provide an Interim Interface to CRMS

Implementing (with a keen focus) on the tax processing, business rules, penalty and interest calculations

1. Phasing the installation approach by filing frequency or some other defined subset of the taxpayer population to help throttle volumes and manage risk during rollout. For example:
    a. Implement annual filers
    b. Implement quarterly filers
    c. Implement monthly filers

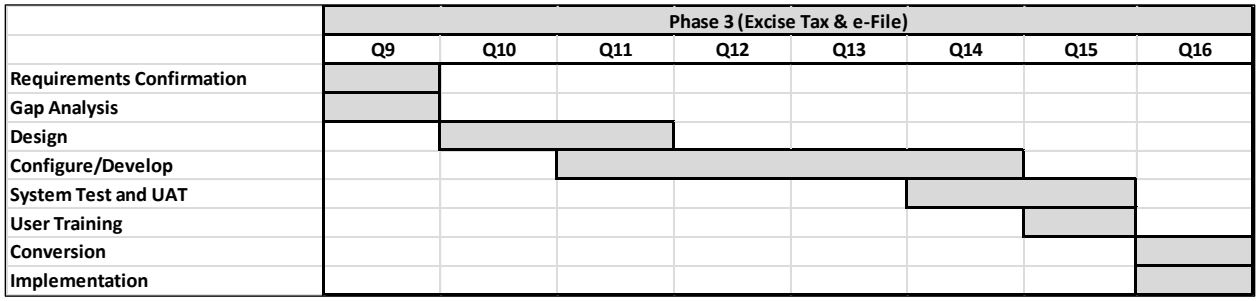

Figure 5-11: Phase 3 Excise, OSR, and E-file Timing

Key activities for this Phase include the following:

1. Project Management –initiated in Phase 1a, and continued in this phase
    a. Routine Controlling Activity – work plan, communications, roles and responsibilities, risk and issue management, change management, identification and evaluation of internal controls improvement opportunities
    b. Management reporting and monitoring
2. Readiness
    a. Validate requirements and COTS capabilities and conduct gap analysis addressing any recommended changes
    b. Update project management plan as needed
3. Design and Development
    a. Design integration with TARIS and CRMS
    b. Design integration with Revenue and Expenditures Accounting
    c. Design integration with Forest Tax for OSRs
    d. Configure application
    e. Develop customizations as needed
    f. Unit, System, and UAT Test
    g. Update and provide documentation
    h. Conduct knowledge transfer of project-specific functionality

i. Add interim interface to FD

4. Integrate Core Support Services
    a. Integrate application and database security with DOR
    b. Integrate DOR document management services with product
    c. Integrate DOR payment services with product
    d. Establish reporting needs within product and design, develop, and test reports
    e. Establish correspondence needs within product and design, develop, and test correspondence
5. Implementation
    a. Conversion
        i. Develop conversion plan
        ii. Design, develop, test conversion programs (using product tools as available)
        iii. Convert data
    b. Implement communication plan for impacted stakeholders
    c. Conduct training for staff
    d. Create user roles and security
    e. Go Live

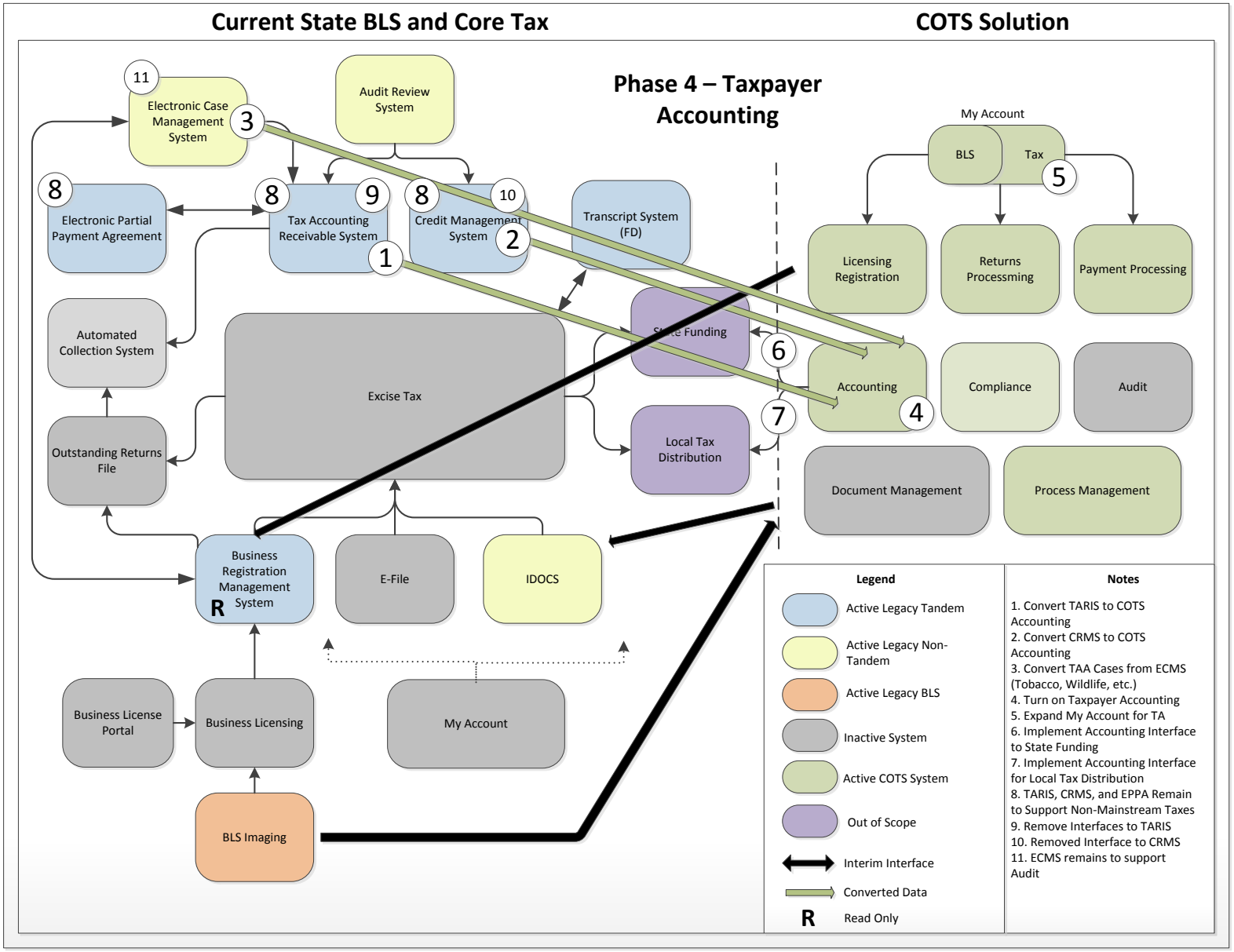

Figure 5-12: Phase 4 TARIS and CRMS

This Phase is a 21-month effort with the following activities:

1. Convert TARIS to COTS Accounting
2. Convert CRMS to COTS Accounting
3. Convert TAA Cases from ECMS (Tobacco, Wildlife, etc.)
4. Turn on Taxpayer Accounting
5. Expand My Account for TAA
6. Implement Accounting Interface to State Financial System (AFRS)
7. Implement Accounting Interface for local tax distribution
8. Support TARIS, CRMS, and EPPA for non-mainstream taxes, and for tax assessments until ARS is converted in next Phase
9. Remove interfaces to TARIS
10. Remove interface to CRMS
11. Support ECMS for Audit

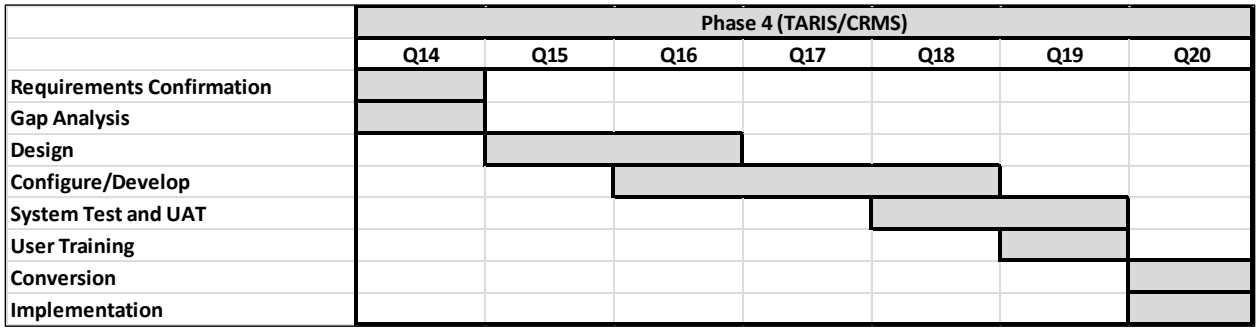

Figure 5-13: Phase 4 TARIS/CRMS Timing

Key activities for this Phase include the following:

1. Project Management –initiated in Phase 1a, and continued in this phase
    a. Routine Controlling Activity – work plan, communications, roles and responsibilities, risk and issue management, change management, identification and evaluation of internal controls improvement opportunities
    b. Management reporting and monitoring
2. Readiness
    a. Validate requirements and COTS capabilities and conduct gap analysis addressing any recommended changes
    b. Update project management plan as needed
3. Design and Development
    a. Configure application
    b. Develop customizations as needed
    c. Unit, System, and UAT Test
    d. Update and provide documentation
    e. Conduct knowledge transfer of project-specific functionality
4. Integrate Core Support Services
    a. Integrate application and database security with DOR
    b. Integrate DOR document management services with product
    c. Integrate DOR payment services with product
    d. Establish reporting needs within product and design, develop, and test reports
    e. Establish correspondence needs within product and design, develop, and test correspondence

5. Implementation
    a. Conversion
        i. Develop conversion plan
        ii. Design, develop, test conversion programs (using product tools as available)
        iii. Convert data
    b. Implement communication plan for impacted stakeholders
    c. Conduct training for staff
    d. Create user roles and security
    e. Go Live

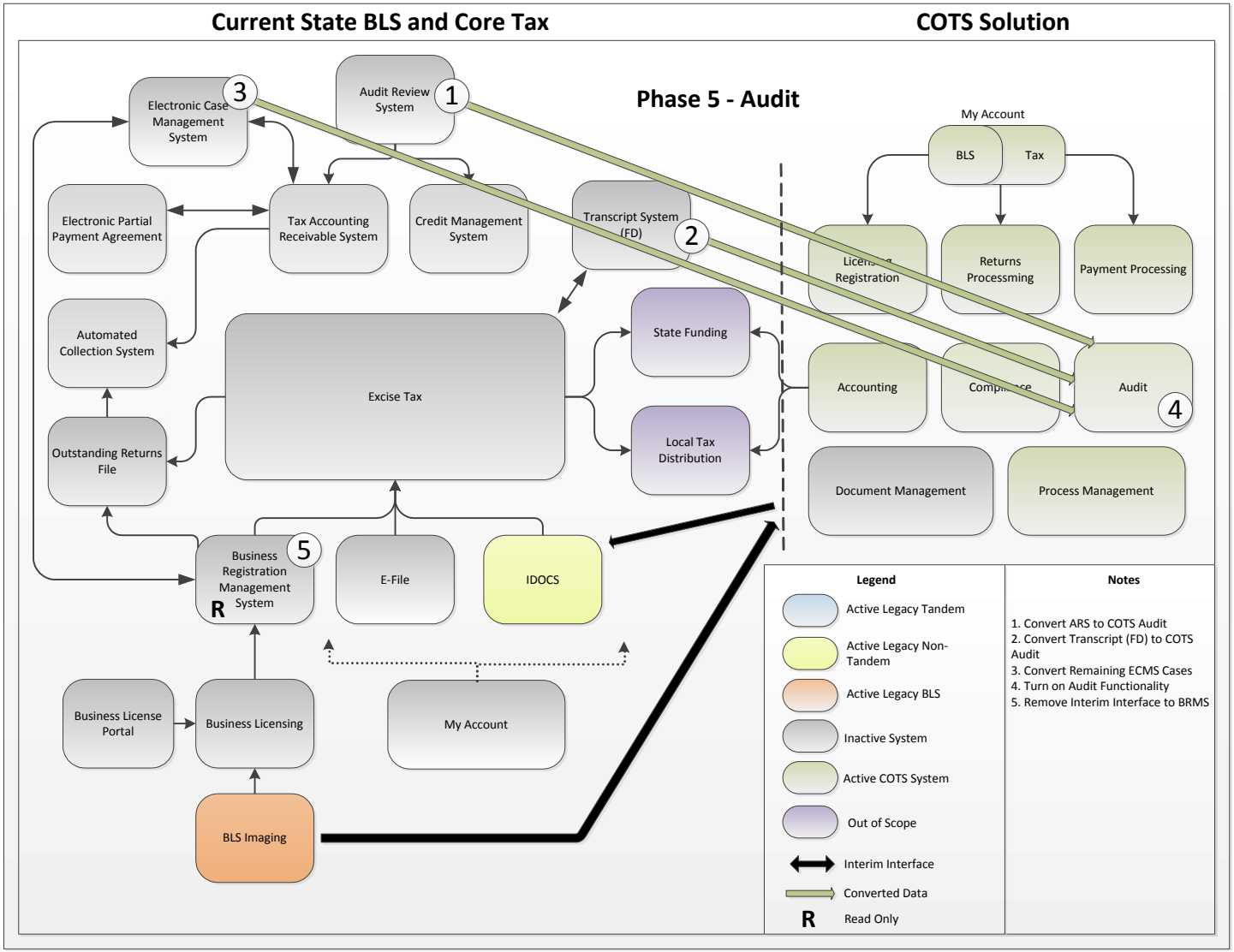

Figure 5-14: Phase 5 Audit

This Phase is a 12-month effort with the following activities: Move all audit assignment and case management functionality to new solution

1. Convert ARS to COTS Audit.
2. Convert Transcript (FD) to COTS Audit.
3. Convert remaining ECMS Cases.
4. Turn on Audit functionality.
5. Remove interim interface to BRMS.

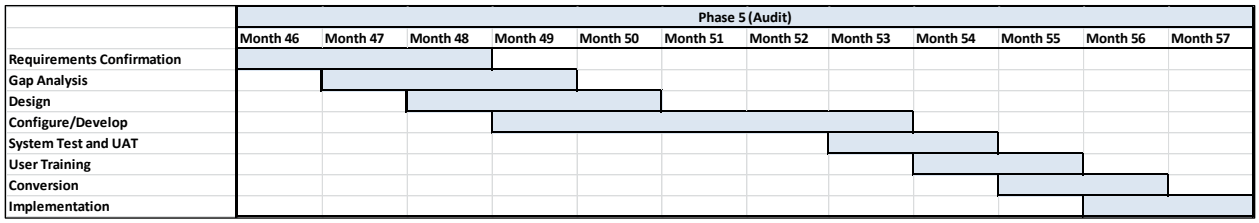

Figure 5-15: Phase 5 Audit Timing

Key activities for this Phase include the following:

1. Project Management –initiated in Phase 1a, and continued in this phase
    a. Routine Controlling Activity – work plan, communications, roles and responsibilities, risk and issue management, change management, identification and evaluation of internal controls improvement opportunities
    b. Management reporting and monitoring
2. Readiness
    a. Validate requirements and COTS capabilities and conduct gap analysis addressing any recommended changes
    b. Update project management plan as needed
3. Design and Development
    a. Configure application
    b. Develop customizations as needed
    c. Unit, System, and UAT Test
    d. Update and provide documentation
    e. Conduct knowledge transfer of project-specific functionality
4. Integrate Core Support Services
    a. Integrate application and database security with DOR
    b. Integrate DOR document management services with product
    c. Establish reporting needs within product and design, develop, and test reports
    d. Establish correspondence needs within product and design, develop, and test correspondence
5. Implementation
    a. Conversion
        i. Develop conversion plan
        ii. Design, develop, test conversion programs (using product tools as available)
        iii. Convert data
    b. Implement communication plan for impacted stakeholders
    c. Conduct training for staff
    d. Create user roles and security
    e. Go Live

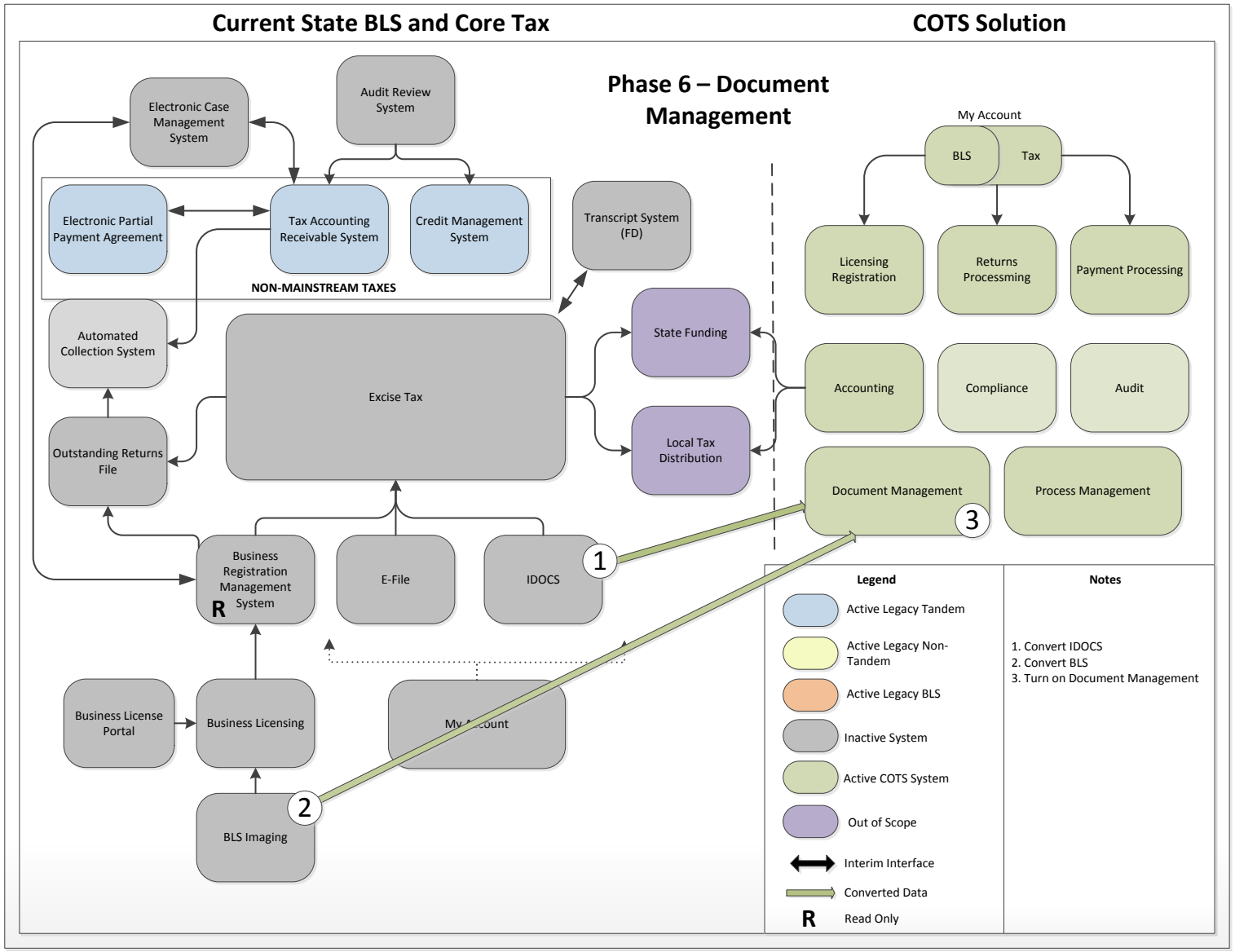

Figure 5-16: Phase 6 IDOCS

This Phase is a 12-month effort resulting in the replacement of existing document storage solution and integrating it with the COTS system. Tasks include:

1. Convert IDOCS.
2. Convert BLS Imaging.
3. Turn on Document Management.

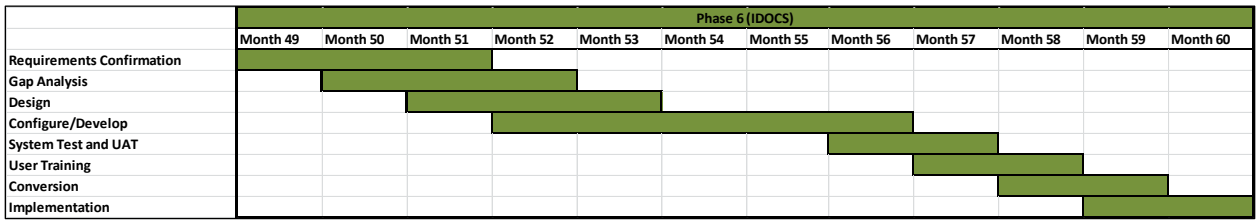

Figure 5-17: Phase 6 IDOCS Timing

Key activities for this Phase include the following:

1. Project Management –initiated in Phase 1a, and continued in this phase
    a. Routine Controlling Activity – work plan, communications, roles and responsibilities, risk and issue management, change management, identification and evaluation of internal controls improvement opportunities
    b. Management reporting and monitoring
2. Readiness
    a. Validate requirements and COTS capabilities and conduct gap analysis addressing any recommended changes
    b. Update project management plan as needed
3. Design and Development
    a. Design integration with COTS solution
    b. Configure application
    c. Develop customizations
    d. Unit, System, and UAT Test
    e. Update and provide documentation
    f. Conduct knowledge transfer of project-specific functionality
4. Integrate Core Support Services
    a. Integrate application and database security with DOR
    b. Integrate DOR receipting services with product
    c. Establish reporting needs within product and design, develop, and test reports
    d. Establish correspondence needs within product and design, develop, and test correspondence
5. Implementation
    a. Conversion
        i. Develop conversion plan
        ii. Design, develop, test conversion programs (using product tools as available)
        iii. Convert data
    b. Implement communication plan for impacted stakeholders
    c. Conduct training for staff
    d. Create user roles and security
    e. Go Live

Approach for Maintaining Interconnected Systems

The tightly coupled nature of the resulting DOR Core Tax and BLS Systems Replacement solution requires a systematic approach to system migration. The key driving factors for this are:

- **Single Combined Excise Tax form** – A single tax form encompasses all mainstream tax types creating a tightly coupled set of tax information associated with a single transaction and payment. (Note: The one exception is Oil Spills tax, which is considered a mainstream tax, but currently has its own tax return.)
- **Interdependent data on three platforms** – The required data is currently stored on IBM mainframe, HP Nonstop mainframe, and Microsoft client server environments. Additionally, data enters the BLS and Core Tax processing systems via IDOCS, E-file, or manual entry.
- **System dependence on direct access to data** – Each of the existing systems in the current Core Tax System make direct calls and queries for the data required to process tax returns.

The new COTS solution is best supported by a parallel systems approach, which allows existing tax processing and BLS systems to function at the same time as the COTS solution. The benefits are as follows:

- The transaction volume on the new system will start small and ramp up, while at the same time the transaction volume on the legacy systems will ramp down during the parallel period. The replacement system will eventually process the total mainstream tax workload.
- To decrease risks, a carefully planned data migration should occur prior to the implementation of the new system and be confirmed after each Phase of the system replacement effort.
- The recommended approach has a somewhat higher maintenance and resource cost during the development process, but minimizes processing risk by maintaining a fallback possibility to the still operable Core Tax and BLS systems.
- In addition, some clearly defined business functions (i.e., Data Capture, Tax Processing, Accounting, Audit, Collections) can be replaced as modules if they are part of a COTS solution platform.

This recommended approach integrates data into a single, comprehensive database and migrates functional capabilities systematically as prescribed by business prioritization.

Accommodating Legislative and Process Changes

With rules clearly documented for each of the core tax systems, legislative and business changes can be quickly analyzed and planned out, with accurate impacts determined. Generally, updates to systems going forward should occur only in the new COTS solution. However, larger legislative changes might change the priority for functional deployment and/or create the need for changes to the existing Core Tax System or BLS System. Implementing any new significant changes in the existing Core Tax and BLS systems could cause delays in the Core Tax and BLS Systems Replacement Project. Therefore, it is paramount that the clearly defined target business model (semantics and rules) be updated at the beginning of each phase.

Resource availability will be a concern whenever major changes have to be made to existing systems during the Core Tax and BLS Systems Replacement Project, particularly as key subject matter experts are assigned to the project in a full-time capacity. A key assumption is that legacy systems will remain fairly stable. That said, if larger changes to legacy systems are required, we assume that the primary operation of the DOR's business is the overriding priority, with the project being secondary. Changes to the

existing Core Tax System or BLS System will primarily fall on IS staff, potentially impacting project resources. DOR Leadership will need to manage these challenges and risks as they come up, take appropriate mitigating action, and adjust expectations accordingly.

6 Itemized Cost Estimates

The six-year replacement cost of both the BLS and Core Tax Systems is estimated to be $70.5 million as presented in Table 6-1 below. This section provides the detailed investment, maintenance, incremental, and lifecycle costs of the replacement.

Table 6-1: Fiscal Year Cost Estimates for the Core Tax and BLS Systems Replacement

Year		BLS	Core Tax	Total
1	FY14	$ 201,500	$ 604,500	$ 806,000
2	FY15	$ 4,651,027	$ 6,146,822	$ 10,797,849
3	FY16	$ 3,770,000	$ 21,799,654	$ 25,569,654
4	FY17	$ 2,112,000	$ 14,842,000	$ 16,954,000
5	FY18	$ 249,400	$ 6,504,500	$ 6,753,900
6	FY19	$ 249,400	$ 9,397,200	$ 9,646,600
Total Project		**$ 11,233,327**	**$ 59,294,676**	**$ 70,528,003**

Investment Costs

The investment costs are those costs directly associated with the development and implementation of the replacement systems. The DOR resource and vendor service costs are a function of estimated hours of work for multiple resource types and corresponding hourly rates. Note that Year 1 estimates the costs for the procurement, and the core project starts in Year 2. The COTS software cost is solely for the core product, while other infrastructure software and the environment hardware is grouped under HW/SW.

Table 6-2: Investment Costs per Year (in thousands)

	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
DOR Resource Cost	$15,210	$ 706	$ 2,117	$ 3,755	$ 4,693	$1,403	$2,537
Vendor Services Cost	$32,739	$ 91	$ 5,483	$10,149	$ 9,398	$3,046	$4,572
IV&V	$ 3,274	$ 9	$ 548	$ 1,015	$ 940	$ 305	$ 457
COTS Software	$12,320	$ -	$ 1,800	$ 6,300	$ 1,352	$1,406	$1,462
HW/SW	$ 6,985	$ -	$ 850	$ 4,351	$ 572	$ 594	$ 618
TOTAL	$70,528	$ 806	$10,798	$25,570	$16,954	$6,754	$9,647

Table 6-3: Investment Costs per Phase (in thousands)

		Proc	Phase 1a	Phase 1b	Phase 1c	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
DOR Resource Cost	$ 15,210	$ 706	$ 1,792	$ 939	$ 645	$ 1,192	$ 4,941	$ 2,270	$ 1,765	$ 960
Vendor Services Cost	$ 32,739	$ 91	$ 4,566	$ 2,537	$ 1,301	$ 3,248	$ 11,281	$ 4,775	$ 3,211	$ 1,730
IV&V	$ 3,274	$ 9	$ 457	$ 254	$ 130	$ 325	$ 1,128	$ 477	$ 321	$ 173
COTS Software	$ 12,320	$ -	$ 1,800	$ 1,575	$ 338	$ 1,890	$ 3,849	$ 1,406	$ 1,462	$ -
HW/SW	$ 6,985	$ -	$ 850	$ 1,088	$ 143	$ 1,305	$ 2,387	$ 594	$ 618	$ -
TOTAL	$ 70,528	$ 806	$ 9,464	$ 6,392	$ 2,557	$ 7,959	$ 23,586	$ 9,523	$ 7,378	$ 2,863

Maintenance Costs

The maintenance costs listed below are the estimated costs of DOR resources, software and hardware necessary to maintain the new systems for four years after implementation.

Table 6-4: Maintenance Costs

	Total	Year 7	Year 8	Year 9	Year 10
DOR Resource Cost	**$ 7,140,000**	$ 1,797,600	$ 1,780,800	$ 1,780,800	$ 1,780,800
Vendor Services Cost	**$ -**	$ -	$ -	$ -	$ -
COTS Software	**$ 6,458,091**	$ 1,520,816	$ 1,581,649	$ 1,644,915	$ 1,710,711
HW/SW	**$ 4,584,897**	$ 2,497,573	$ 668,671	$ 695,418	$ 723,235
TOTAL	**$ 18,182,988**	**$ 5,815,989**	**$ 4,031,120**	**$ 4,121,133**	**$ 4,214,746**

Incremental Costs

Incremental costs are the difference between costs of current methods of operation using the Agency's legacy systems and the cost of implementing and operating the new COTS application and corresponding business process changes. The replacement system and business processes are expected to improve operational efficiency in both the Operating and Information Services divisions of DOR as presented in Table 6-5 below. In Year 7 of the 10-year lifecycle, the first post-project year, DOR is expected to have efficiencies (i.e., savings) of approximately $5 million, and these should continue annually thereafter.

Table 6-5: Incremental Impact (Project Year 7 and Annually Thereafter)

OPERATIONS COSTS	Current	Post-Project	Incremental Impact
Salaries and Wages	$ 44,060,092	$ 41,531,212	$ (2,528,880)
Employee Benefits	$ 14,788,110	$ 13,874,670	$ (913,441)
Personal Service Contracts	$ 1,326,300	$ 873,150	$ (453,150)
Communications	$ 2,055,300	$ 1,849,260	$ (206,040)
Hardware Rent/Lease	$ 190,500	$ -	$ (190,500)
Hardware Maintenance	$ 13,500	$ 13,500	$ -
Software Rent/Lease	$ -	$ -	$ -
Software Maintenance & Upgrade	$ 1,029,480	$ 2,611,129	$ 1,581,649
CTS Goods/Services	$ 356,000	$ 178,000	$ (178,000)
Goods/Services Not Listed	$ 8,221,070	$ 7,089,064	$ (1,132,006)
Travel	$ 1,134,100	$ 1,125,170	$ (8,930)
Hardware Purchase Capitalized	$ 1,103,815	$ 110,850	$ (992,965)
Software Purchase Capitalized	$ -	$ -	$ -
Hardware Purchase - Non. Cap	$ -	$ -	$ -
Software Purchase - Non. Cap	$ -	$ -	$ -
Hardware Lease/Purchase	$ -	$ -	$ -
Software Lease/Purchase	$ -	$ -	$ -
Other (specify)	$ -	$ -	$ -
TOTAL OPERATION COSTS	**$ 74,278,267**	**$ 69,256,005**	**$ (5,022,262)**

Ten-Year Lifecycle Costs

The anticipated 10-year lifecycle estimated cost for the COTS Alternative is $88,710,993. Table 6-6 below provides an estimated, total cost broken down by DOR salary and benefits; vendor services; COTS software purchase; and, hardware/software purchase and maintenance. Appendix A contains the detailed worksheet of estimated costs.

Table 6-6: Ten-Year Lifecycle Cost

Cost Category	Amount
DOR Resource Cost	$ 22,349,600
Vendor Services Cost	$ 32,739,041
IV&V	$ 3,273,904
COTS Software	$ 18,778,494
HW/SW	$ 11,569,954
TOTAL	$ 88,710,993

Cost Benefit Analysis

The Cost Benefit Analysis uses the State of Washington OCIO cost-benefit approach to determine the Net Present Value (NPV) and the Internal Rate of Return (IRR) for the project incorporating lifecycle costs, operational savings, and projected benefits. The systems replacement solution is expected to increase the efficiency of Information Services, Taxpayer Account Administration and Taxpayer Services, and new compliance and audit tools should lead to an increase in audit and collection revenue.

Table 6-7: Project Benefits

Project Benefits	
EFFICIENCIES – The new system automates many processes, reduces data errors and redundancies, and enables taxpayers and business more direct access to information.	
Business Licensing Service **Estimated 50% reduction in costs**	• Reduced data entry, data validation, and reconciliation across systems (BLS and BRMS). • Greater data accuracy and timeliness; the system will have real-time rules evaluation and updates, thus reducing data inconsistency caused by delays in system processing.
Taxpayer Account Administration **Estimated 10% reduction in costs**	• Reduced level of manual reconciliation; the system business rules and tighter integration across functions will present a complete picture of a taxpayer's accounts, and this will reduce the amount of time currently spent manually reconciling accounts. • Greater data accuracy and timeliness; the system will have real-time rules evaluation and updates, thus reducing data inconsistency caused by delays in system processing.
Taxpayer Services **Estimated 10% reduction in costs**	• Reduced number of taxpayer inquiries. The improved "My Account" functionality and data accuracy will enable greater taxpayer self-service, thus reducing the number of calls and correspondence to DOR. • More accurate/timely responses to taxpayer inquiries; the system will significantly reduce the amount of time required to provide a taxpayer with a consolidated view of their account.
Audit and Compliance **Estimated 5% efficiency improvement**	• Efficiencies in this area allow DOR to direct resources to more effective audit and compliance treatment strategies. • Auditors will employ analytically derived audit candidates that will yield greater results, thus reducing the number of "no change" audits. • Accounts receivable will be accurate, and the collection process will score accounts receivable and direct them to the most effective treatment.
Information Services **Estimated 5% efficiency improvement**	• Efficiency improvement resulting from fewer systems to integrate and a lower level of effort required to configure systems rather than modify code.
ADDITIONAL REVENUE – The high-level requirements bring additional compliance tools to bear in the new system, and these are expected to generate the following benefits. These benefits can be derived as part of the Compliance Phase (Phase 2) of the project, or as their own "Early Wins" Phase (specifically intended to generate revenue, but not from fully implemented solution components).	

Project Benefits	
Audit **10% revenue improvement**	• Efficiencies noted above will enable auditors to better identify and pursue audit candidates. For purposes of this study, and based on the experience of other revenue agencies, the new system is expected to increase audit revenue 10% over a current base of approximately $200M per year. This would result in $20M each year following the implementation of the audit components.
Collection **5% revenue improvement**	• The collection process will benefit from tighter integration with the other core tax systems, expanded case management functionality, and an improved analytical approach to prioritizing cases and assessing risk. For purposes of this study, and based on the experience of other revenue agencies, the new system is expected to increase collection revenue 5% over a current base of approximately $425M per year. This would result in $21M each year following the implementation of the collection components.

As a result of evaluating the 10-year costs and benefits, the COTS solution is expected to have a NPV = $107,000,000 and give an IRR of 41.25%. Figure 6-1 below presents cumulative costs and benefits over the 10-year lifecycle; the Core Tax and BLS Systems Replacement is expected to realize a 3:1 return on investment. The detailed OCIO workbook supporting these calculations is located in Appendix A. If the DOR chooses to include an "Early Wins" Phase of the project (not included in this example), the benefits stream can be accelerated, thereby increasing the 10-year total benefit and the IRR.

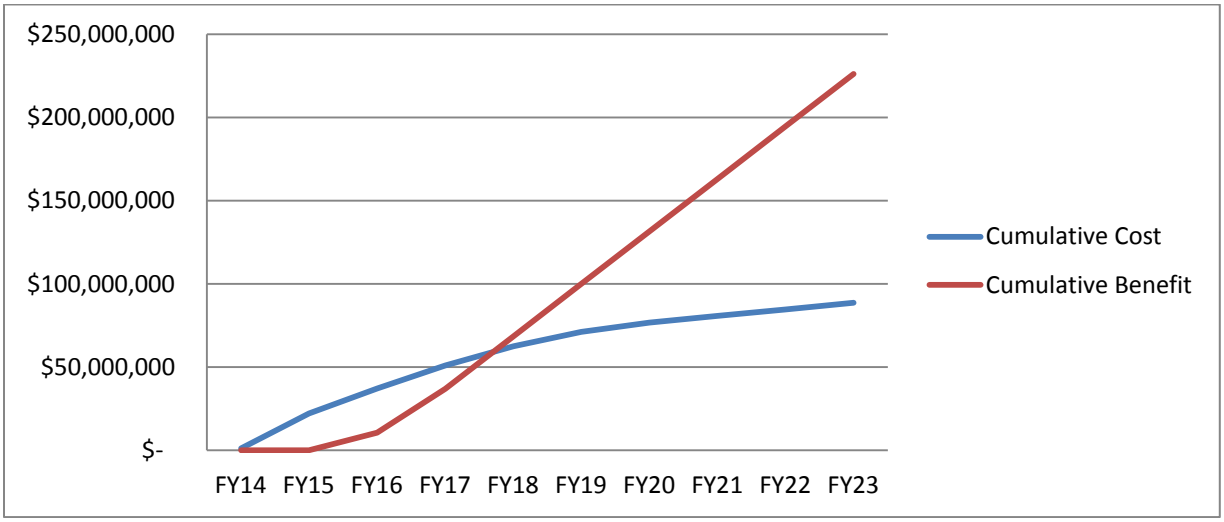

Figure 6-1: Cumulative Costs and Benefits

7 Staffing Requirements

The Core Tax and BLS Systems Replacement Project is estimated to take nearly 400,000 hours of effort from both DOR and vendor staff combined. This project will employ a variety of technical, functional, and managerial skill sets over the course of six years. Staffing needs to also include backfilling positions in business areas so that subject matter experts can become part of the project team. The project is expected to begin with an RFP development and vendor selection period. In Year 2, the project team will include a core team of vendor COTS experts and DOR subject matter and technical infrastructure experts. Staffing will peak in Year 3, and then gradually ramp down to a dozen DOR support staff once the project is completed at the end of Year 6. Figure 7-1 below presents the project staffing estimates quarterly for the duration of the project. The costs detail sheets in Appendix A contain the quarterly details for types of resources (e.g., application developer, business analyst, etc.).

Please note that project staff will drop to zero at the end of the project, and ongoing maintenance staff is estimated to be 12 in years seven through ten. This assumes that the ongoing maintenance effort is to maintain routine changes to business rules, configuration of workflow to align with business priorities, maintenance of solution infrastructure, and daily operations of the application. Ongoing maintenance estimates do not include any provision for major application changes.

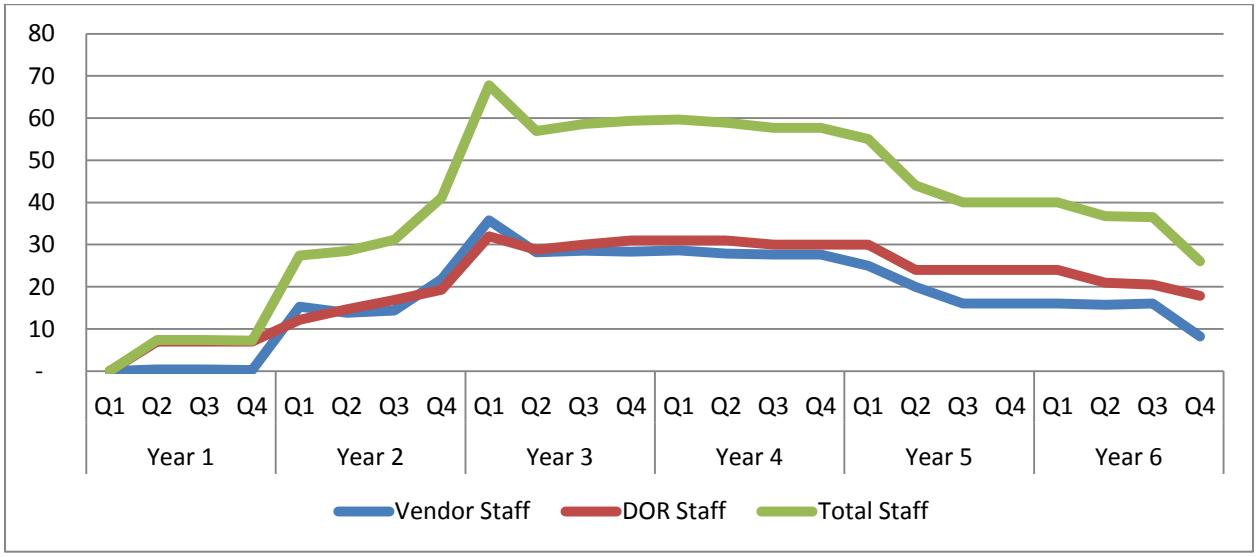

Figure 7-1: Project Staffing Estimates (FTEs)

It is essential that the DOR use the implementation project as a vehicle to prepare for full control of the solution following the implementation. Comprehensive Knowledge Transfer (KT) should be a required component of the vendor's obligation as part of the project, so that through the implementation, DOR staff becomes knowledgeable in the technologies, toolsets, infrastructure, data model, functionality, and source code. In this way, the DOR will be well positioned to be fully self-sufficient with the new application, and can take full advantage of future baseline software upgrades in a timely and efficient manner when those improvements are made available. This KT is also critical to ensuring the DOR can respond quickly to legislative changes, without heavy reliance on the vendor.

Table 7-1 below presents the typical roles and resource requirements of DOR for the implementation of the COTS solution throughout all releases of the project. This staff supports the implementation of the

new system and gains valuable, on-the-job training and knowledge transfer by being involved throughout the project and working side-by-side with the vendor.

Table 7-1: DOR Roles and Resource Requirements

Role	Task	Skill Level/Required Skills	# of Staff Suggested	Level of Involvement
Program Sponsor	A senior executive whose primary responsibility lies in the overall sponsorship of the initiative. This individual reports to the Director, champions the project and holds the strategic initiatives of the Agency at hand when making decisions regarding the program. The support of the Program Sponsor needs to be clear and outspoken in terms of the scope of the project, the commitment of the Agency to successfully complete the project and the commitment of the Agency to provide resources needed for the project.	Agency Executive	1	Part time < 50%
Project Manager and Project Management Office (PMO)	Works together with the vendor project managers to oversee the day-to-day activities of the project, manages the project plan, escalates and resolves issues, monitors risks, and oversees that the project plan is upheld.	Experienced Managers. Skills should include project management experience, strong leadership, working knowledge of business licensing and/or tax administration and WA DOR, strong analytical, verbal and written communication skills.	2	Full time
Deputy Project Manager	Supports PMO in the day-to-day activities and reports back to PMO on how the team is tracking to plan and how issues and risks are being addressed.	Experienced Manager. Skills should include project management experience, strong leadership, working knowledge of tax administration and WA DOR, strong analytical, verbal and written communication skills.	1	Full time

Role	Task	Skill Level/Required Skills	# of Staff Suggested	Level of Involvement
Implementation Lead	Refines the program implementation plan to apply specifically to the release. Works with the conversion leads to finalize the release conversion approach. Leads and supports the configuration specification Phase of the project, including rules harvesting. Works with the business subject matter experts and contractor analysts to configure the application to meet the requirements for the release. Provides guidance to the test lead to develop the test plan and schedule. Provides design guidance for system extensions.	Manager experienced in operations or systems development for the particular release function. Skills should include project management experience, strong leadership, working knowledge of tax administration and WA DOR, strong analytical, verbal and written communication skills.	1	Full time for release
Business/System Analysts	Works with the Agency subject matter experts to develop the target business rule specifications and system configurations. Verifies requirements, develops general system designs, and supports detailed system designs, code, and unit tests. Incorporates internal controls in both the application configuration and in the business processes.	Minimum of three years of experience in the subject area systems with deep and comprehensive knowledge of the system data structure and business rules.	7	Part time 75%

Role	Task	Skill Level/Required Skills	# of Staff Suggested	Level of Involvement
Application Developers	Works with vendor analysts to configure the system, creates custom packages for integration where necessary, and programs interfaces as required by the various business processes. The developers create extracts for conversion effort and provide expertise regarding the legacy system as required. In addition, the Agency developers would perform report development.	Minimum of three years of application development experience. Skills should include legacy system programming environment knowledge, relational data base/SQL experience Java, C# and .NET.	5	Part time 50%
Subject Matter Experts • **Licensing** • **Registrations** • **Returns Processing** • **Cash Management** • **Taxpayer Accounting** • **Credits** • **Revenue Accounting** • **Compliance** • **Audit**	DOR subject matter experts remain accessible for Joint Application Design sessions, rules specification, requirements clarification, deliverable review and test planning. DOR subject matter experts participate in system test and execute user acceptance test. Expect Phase 1 to require the highest number of DOR subject matter experts, as it includes multiple business taxes, including general excise tax.	Minimum of five years of experience in the subject area with deep and comprehensive knowledge on how the Agency currently performs the business process including know-how, from end-user perspective, of supporting systems. Strong analytical, verbal and written communication skills also required.	7	Full time for duration of project

Role	Task	Skill Level/Required Skills	# of Staff Suggested	Level of Involvement
Test Lead	Test lead participates in and oversees system test plan development, system test script development and system test execution. The test lead monitors test progress including the number of executed, passed, and failed conditions. The test lead takes responsibility for the user acceptance test plan and execution. The contractor test lead supports user acceptance test.	Manager, preferably with broad knowledge on how the Agency currently performs cross functional business processes including know-how, from end-user perspective, of supporting systems. Strong analytical, verbal and written communication skills also required.	1	Full time by release
Testers	DOR Testers will work with the Contractor testers to develop test scripts, prepare test data and execute tests. Testers also log defects and work with the assigned developers to retest as needed. The vendor will assume DOR participation in system test and user acceptance test; with the assumption that subject matter experts fill these rolls (see Subject Matter Experts above).	Minimum of five years of experience in the subject area with deep and comprehensive knowledge on how the Agency currently performs the business process including know-how, from end-user perspective, of supporting systems.	5	Part time
Training Lead	Training leads refine the software training materials and online help. They plan training development and execution. The Agency training lead participates in end-user training. The contractor training lead executes train-the-trainer.	Supervisor or Manager. Previous end-user system training experience desirable.	1	Full time by release

Role	Task	Skill Level/Required Skills	# of Staff Suggested	Level of Involvement
Trainers	Trainers refine the software training materials and online help for the release, under the direction of the training lead. DOR trainers deliver end-user training. The vendor trainers execute train-the-trainer.	Excellent verbal and written communication skills. Prior training experience. Knowledge of legacy systems, policies, and procedures.	2	Part time by release
Conversion Lead	Oversees the implementation and conversion efforts necessary for deploying each release of the project.	Manager, preferably with broad knowledge on how the Agency currently performs cross functional business processes including know-how, from end-user perspective, of supporting systems. Strong analytical, verbal and written communication skills also required.	1	Part time 50%
Conversion Analysts	Designs conversion scripts. Works with the project managers and subject matter experts to schedule conversion, including shut-down and ramp-up procedures.	Minimum two years of experience working with legacy system data; legacy interface experience helpful.	2	Part time 75%
Interface Lead	Analyzes legacy data systems and manages the interface team through identifying requirements, design, code, and test of new interfaces.	Minimum five years of experience with interface development, preferably with strong knowledge of legacy architecture and interfaces. Strong analytical, verbal and written communication skills also required	1	Part time 75%
Interface Analysts	Designs interface programs and works with the project managers and subject matter experts to transition the new interfaces to production	Minimum two years experience working with legacy system data; legacy interface experience helpful.	2	Part time 50%

Role	Task	Skill Level/Required Skills	# of Staff Suggested	Level of Involvement
Database Administrator	Work alongside vendor database administrators to learn and administer the COTS databases.	Database Administration expertise with database product.	1	Part time 50%
Production Control Specialist	Responsible for scheduling and overseeing offline processing.	Production Control Supervisor.	1	Full time after implementation.
Security Administrator	Work alongside vendor technical staff to learn and implement the COTS security structure.	Security Administrator or above familiar with security policies of the Agency as well as roles and organizational structure.	1	Part time
Reports Lead	Analyzes legacy data system reports and manages the reports team, which maps the legacy system's reports to the new environment. Designs and manages report development.	Minimum three years of experience with legacy data systems reports. Strong analytical, verbal and written communication skills also required.	1	Part time 50%
Reports Analysts	Gathers report requirements and designs reports. Works with the project managers and subject matter experts to develop, test, and transition from old reporting structure to the new one.	Minimum one year experience with legacy data systems reports.	2	Part time 75%
Quality Assurance, Data Cleanup, and Decommissioning Legacy Systems	Performs quality assurance checks, data cleanup in new systems and legacy, supports the decommissioning of legacy systems.	Various	2	Part time 75%

8 Data and System Architecture

Large-scale system implementation projects, particularly those which require data migration and decommissioning of legacy systems, are complex, challenging, costly, and risky undertakings. For the COTS approach to Core Tax and BLS Systems Replacement, the desired path is clearly aligned with the release schedule and is made simpler for the following reasons:

1. Most COTS solutions drive the data model to support the applications associated with the solution. While the destination is known, the functional migration sets the schedule for the data migration.
2. Additionally, methods for maintaining data quality vary depending on the strategy. The vendor of the COTS solution will provide the tools, techniques and methodology for data migration to the new platform.
3. DOR should expect vendors to seek DOR staff to extract data from legacy systems.

Data Migration/Transformation Strategy

As with system migration, the tightly coupled nature of the Core Tax and BLS future solution drives the need for good data integration. It is essential for the success of the solution that key sources and stores of data, which are integral to both the BLS side and Core Tax side of the solution, be architected to ensure minimal risk of "out of synch" conditions. The key driving factors for this are:

- **Single tax form** – The single tax form creates a complex data set associated with each transaction.
- **Single business licensing form** – The combined licensing process creates a complex, variable data set with numerous purposes and recipients of data.
- **Interdependent Data on three platforms** – Migrating the data from three platforms (IBM mainframe, HP NonStop mainframe and Microsoft environments) creates a diversity of migration techniques and a variance in data purification needs.
- **System dependence on direct access to data** – Migrating the data from the core BLS and Tax systems creates risk for data integrity that must be mitigated.

Data Integration Strategy

In developing a data integration strategy for the COTS alternative, the vendor's expertise in deploying the solution must be leveraged. A complete Architecture including Data Management Strategy, Conceptual Data Model and Logical Data Model should be provided by the vendor and approved by DOR. The strategy and models must start with the semantic, fact and data models developed for DOR as-is. Key attributes of all data included in the scope needs to be determined.

Critical components – To initiate the data migration, key architectural detail must be gathered around the existing architecture. Then the strategy/roadmap for integrating the information into the COTS solution must be developed. The primary components are:

- **Semantics** – Clearly defining existing DOR fact and semantic models will ensure a quality transition. Primary source of each data element must be determined to ensure the accurate and appropriate data enters the COTS solution. This effort should begin immediately with semantic conflicts being resolved as the process develops.
- **Update cycle** – Determine the update/transaction and refresh rate per system/table. This may impact not only the data integration, but also the functional migration path.

- **Modeling** – Develop a standard process, format, and set of samples for conceptual, logical and physical data models. These are required to successfully develop the migration plan and associated strategies. Conceptual and logical models are required to initiate the planning process, while physical models are required for implementation processes and procedures.

Developing the high-level architecture (conceptual data model, fact model, and semantics) is a key to success for the Core Tax and BLS Systems Replacement Project. Below are some simple steps to creating these high-level models with suggested content. These steps can be completed by DOR staff, in conjunction with DOR Data Management Group, or by COTS solution partner. DOR ownership and understanding of these artifacts is critical to the long term durability of the solution.

Step 1: The Purpose

The following are the major focuses and purposes for the high-level architecture. Currently, several key needs exist:

1. Integrated data structure (BLS/Core Tax) that is effective and efficient
2. Clarity and consistency of BLS and Core Tax terminology (for example: TRA, UBI, etc.)
3. Reduced data redundancy; incorporate Partner data and map to DOR current data
4. Ability to clearly set security standards across BLS and Core Tax data, including access rights, security monitoring and compliance with IRS standards
5. Performance metrics and decision analytic support

Meeting these needs means that DOR staff, the COTS vendor, Partners (other agencies that use the BLS system) and businesses will have secure access to the appropriate information as well as a similar understanding of the system. Additionally, IS staff, processing staff, and customer support staff would leverage the common understanding to work together and significantly improve processes. During these process improvements, risk and testing are reduced by the clear high-level architecture. Finally, and most importantly, the architecture will support improved communications and consistency in terminology both internally and externally.

A methodology and approach for creating the required architecture models listed above needs to be determined, whether a top-down, bottom-up or hybrid. Matching the right factors with the right modeling approach will dramatically increase the probability of having a successful architecture model.

In the case of Core Tax and BLS Systems Replacement, the following information must be captured:

- Existing business terminology and rules.
- Proposed COTS business terminology and rules.
- Existing software application terminology and rules.
- COTS (proposed software) application terminology and rules.

Step 2: Identify Model Stakeholders

It is recommended to document the names and departments of those who will be involved in building the high-level data model, as well as those who will use it after its completion. A high-level data model stakeholder is someone who will be affected directly or indirectly by the model that is produced during the modeling sessions. When the data elements consist of business-oriented data, the stakeholders are business managers, analysts or users. When the data elements consist of application-oriented data, the stakeholders are more technical, such as system owners, developers and database administrators. Stakeholders should be required to sign off on the models.

Step 3: Inventory Available Resources

Determine the names of those who will be involved in building the high-level data model. These should in some way represent the stakeholder's perspectives. Representatives from both business and IT should be included.

Additionally, identify documentation that provides useful content to the model. Examples of this documentation include systems documentation and requirements documents, much of which was collected during the BLS and Core Tax assessments. The requirements from the RFP should serve as a starting point for a Requirements Traceability Matrix to assist in validation and functional traceability.

Step 4: Develop Data Model Standards

The following data model types provide benefit for different purposes:

- **Relational data model –** Describes the operational databases that support business processes.
- **Dimensional data model** – Used exclusively for reporting.
- **Business perspective** – Illustrates and describes a defined portion of the business.
- **Application perspective** – Illustrates and describes a defined portion of a particular application.

Step 5: Select Approach

For each model created as part of the data architecture, choose either a top-down, bottom-up or hybrid approach based on the purpose of the model. Even though the three approaches for building data models sound completely different from each other, they have a lot in common. In fact, the major difference between the approaches lies in the initial information gathering step.

Step 6: Capture the Audience – View for a Given Model

Using the terminology and rules of a particular audience, capture the information needed to model the data associated with the business, application or performance area of interest. The intent is to capture the data without complicating the effort with new language. The purpose here is to simply capture their view of the BLS and Core Tax world; the next step will reconcile the deliverable from this step with enterprise terminology.

Step 7: Incorporate Enterprise Terminology

When a model is well understood by the audience, ensure the terminology and rules are consistent with the organizational perspective. Once DOR has captured the stakeholder view in the boxes and lines of the audience high-level model, you can move on to the enterprise perspective. To build the enterprise perspective, modify the audience model to be consistent with enterprise terminology and rules. Ideally, this enterprise perspective is captured within an enterprise data model.

Step 8: Sign-Off

Require and obtain approval from the stakeholders that the model is correct and complete. After the initial information gathering, make sure the model is reviewed for data modeling best practices, as well as the fact that it meets the requirements. The sign-off process on a high-level data model does not require the same formality as signing off on a physical design, but it should still be taken seriously.

Step 9: Market/communicate

Similar to introducing a new product, advertise the new model so that all those who can benefit from it know about it. Make sure a specific communication plan is created as part of the project's deliverables. This communication plan outlines both the message and the target audience.

Step 10: Maintain

High-level data models require maintenance. Make sure models are kept up-to-date, at a minimum, throughout the life of the implementation project. This usually requires a formal process for keeping the model up-to-date and aligned with the other models as they are developed.

Step 11: Establish Data Integration Sequence

Based on the sequence of functional migration (found in section 5 – Release Strategy and Timelines), the data integration sequence with risk mitigation methods must be established as follows:

- Draft the data integration sequence for the full lifecycle (BLS, BRMS, etc.).
- Establish criteria and reason for sequence that allows for governance during the integration.

Step 12: Develop Data Integration Timeline

The Data Integration Plan must be developed and integrated into the overall Core Tax and BLS Systems Replacement Project plan. This portion of the overall project plan will ensure data dependencies are available in appropriate time sequence for efficient replacement system deployment. The timeline must include the following:

- Schedule for replication, staging, and migration for each data category.
- Alignment with system development project plan.

Step 13: Develop Data Warehouse Architecture

Development of the architecture for the Data Warehouse, business intelligence and decision support solutions is a separate effort that depends greatly on the rest of the approach. Considerable planning should be developed around a new concept of operations and should identify key performance indicators such as: time to register, renew, and approve licenses', availability and access to timely information.

Step 14: Finalize Data Integration Tool Set

COTS vendors may have a preferred set of data integration tools. Regardless of the selected tools, DOR users will most likely need training. Additionally, the DOR staff and the vendor must discuss the use and access to the tools and data during the integration.

System Hardware Architecture

Infrastructure/Hosting Requirements

A robust infrastructure that is scalable, highly available and consistent with open standards is suggested. The hardware platform supports five (5) environments: Production, Development, Test, User Acceptance and Training. The infrastructure suggested is Windows Server for sizing purposes only. Microsoft SQL Server is suggested for the database engine, with a full complement of database tools, tuning packages and auditing capabilities. Best of breed analytic and business intelligence tools, along with a replacement for the Agency's imaging software is included. Tools for the Agency to programmatically support a typical system, such as Visual Studio, are also included.

Hardware Architecture

Figure 8-1 and Figure 8-2 below depict a model hardware platform for a large scale, integrated Business Licensing, Integrated Tax, Audit, Compliance, Imaging and Internet Taxpayer Service Center. The Taxpayer Service Center includes functionality for Business Licensing and "My Account."

The platform suggested includes a production equipment platform that leverages Logical Partitions (virtual machines) with high availability. A separate, non-production environment with similar equipment and software will leverage more Logical Partitions (virtual machines) to segment the various non-

production environments of Development, Test, User Acceptance and Training. The server counts are summarized in the sections below.

8.1.1 Production Hardware Architecture

Figure 8-1 is an overview of the production environment. The number of servers in the drawing is illustrative to show clustering and failover capabilities.

Assumptions: The configuration does not include disaster/recovery or network equipment. A high degree of virtualization is also assumed at web and application layers.

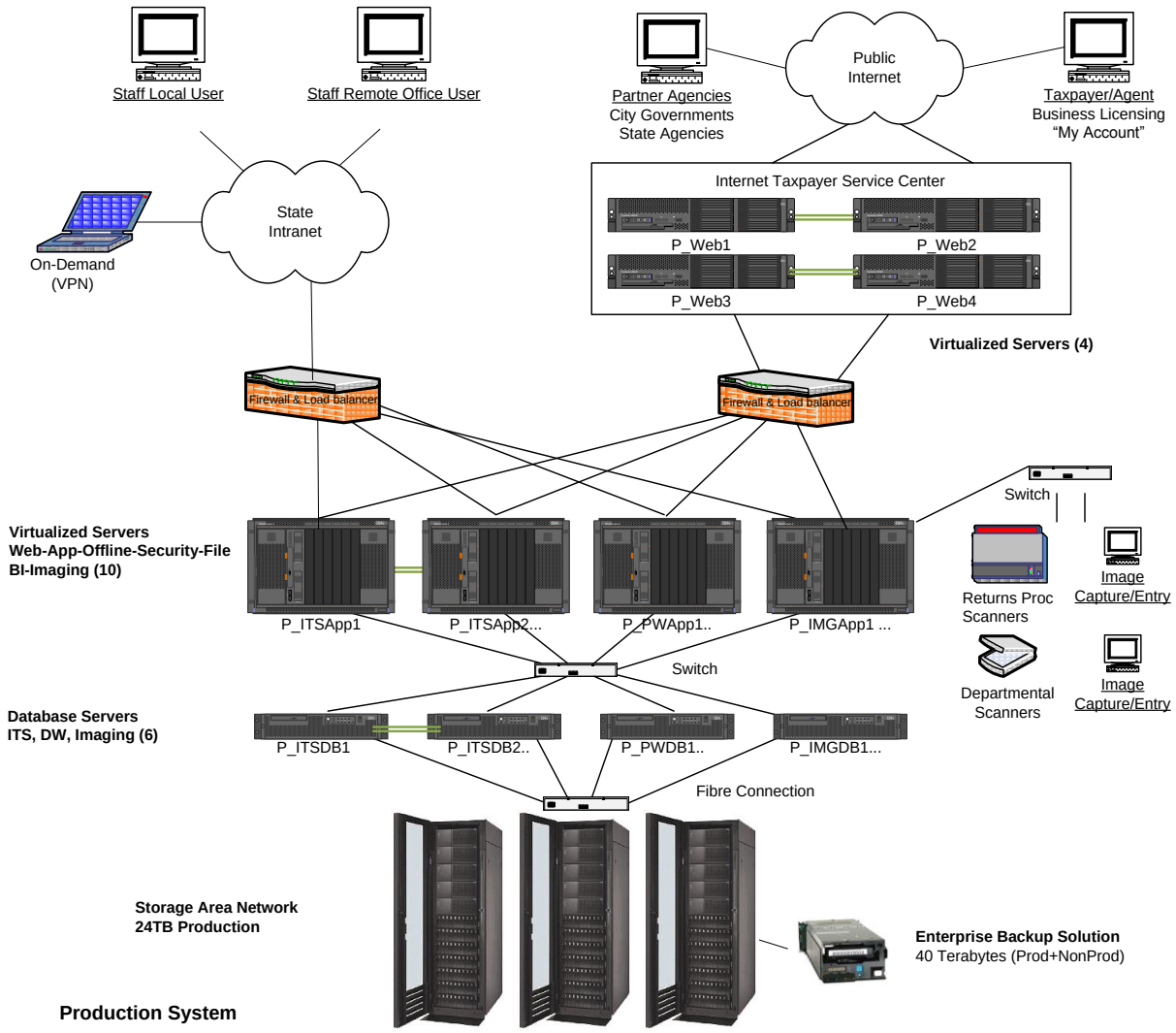

Figure 8-1: Production Hardware Overview

8.1.2 Non-production Hardware

Figure 8-2 provides a complete replica of all production software and uses the same models of server hardware as production.

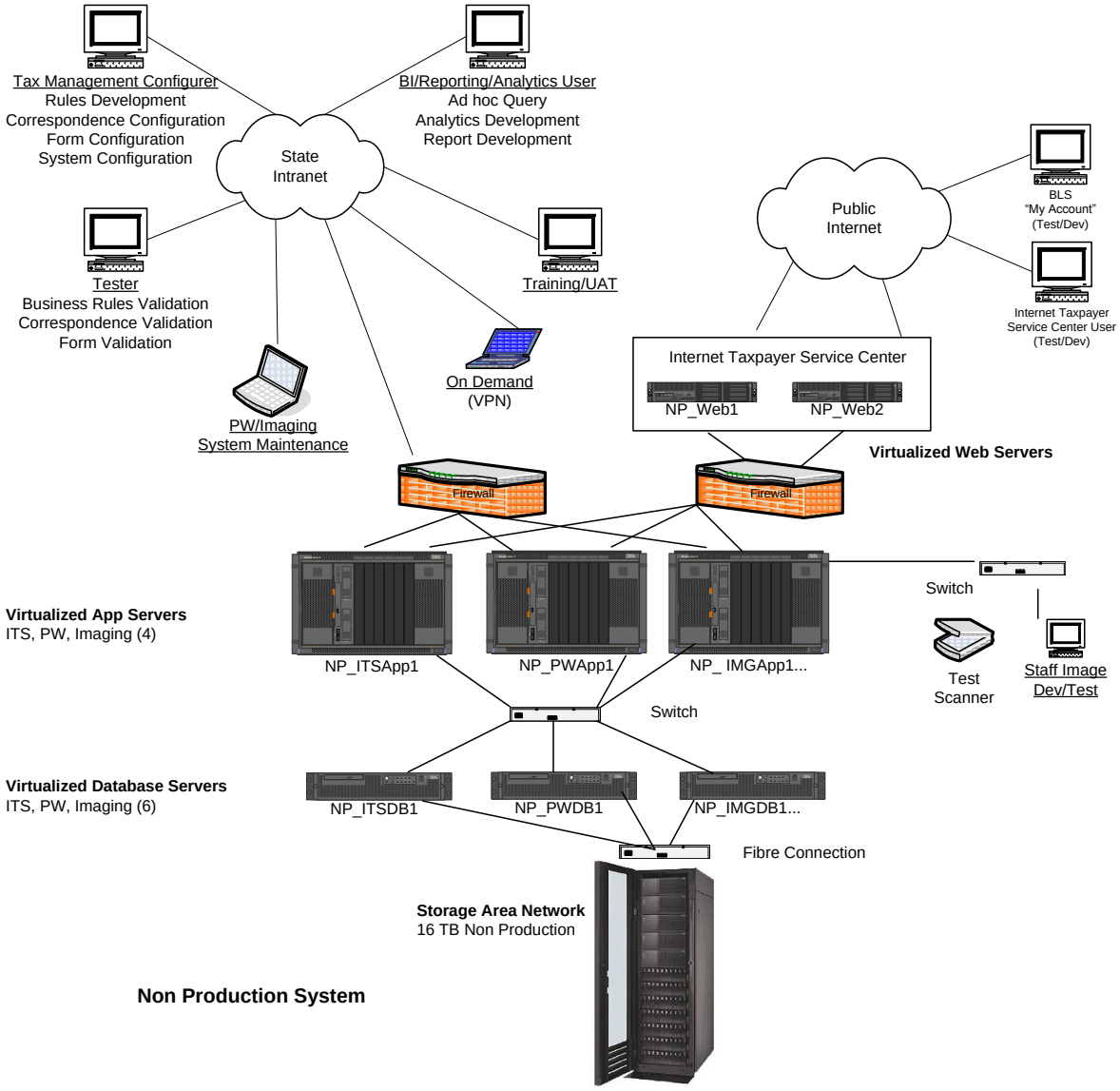

Figure 8-2: Non-Production Hardware Overview

9 Hardware and Software Requirements

The table below is representative of the hardware and third-party software requirements necessary to support the solution.

Table 9-1: Hardware and Software Requirements

Quantity	Description	Function/Use
Server Hardware:	For simplicity, all servers configured the same except for database servers. Use of VMware is suggested for Web and Application Servers, but not for Database Servers	All servers are assumed to run 64-bit Windows OS, or could be a mixture of Windows for presentation and Unix for application and database
6	4 CPU Quad Core (16 Cores) each	**Production** – Web / Application Servers
4	4 CPU Quad Core (16 Cores) each	**Production** – Web Internet Taxpayer Service Center (BLS, "My Account" Taxpayer Access)
4	4 CPU Quad Core (16 Cores) each	**Production** – Offline/Third-Party Application Servers
2	8 CPU Quad Core (32 Cores) each	**Production** – Operational Database Server – ITS & BLS
2	8 CPU Quad Core (32 Cores) each	**Production** – Operational Database Server – Reporting / Data Warehouse
2	8 CPU Quad Core (32 Cores) each	**Production** – Operational Database Server – Imaging
2	4 CPU Quad Core (16 Cores) each	**Non Production** – Web / Application Servers
2	4 CPU Quad Core (16 Cores) each	**Non Production** – Web Internet Taxpayer Service Center
2	4 CPU Quad Core (16 Cores) each	**Non Production** – Offline/Third-Party Application Servers
2	4 CPU Quad Core (16 Cores) each	**Non Production** – Database Servers – ITS & BLS
2	4 CPU Quad Core (16 Cores) each	**Non Production** – Database Servers – for Reporting and Data Warehouse
2	4 CPU Quad Core (16 Cores) each	**Non Production** – Database Server – Imaging
32	Total Servers	
SAN & Backup:		

Quantity	Description	Function/Use
1	Storage Area Network, suggest 40TB for 5 environments	25TB for Production and Imaging, 15TB for Dev, Test, UAT & Training
1	Enterprise backup solution	Robust tape cartridge library and backup software
Environmental Software:		
	SQL Server Database Software Enterprise Edition. Suggest Database Tools such as Partitioning Packs, Tuning Packs, Diagnostics Packs, Change Management Pack, Configuration Management and Clustering	1 copy for production, 1 copy for non-production, assumes the SAN is partitioned for the 5 environments. Suggest perpetual licenses.
Analytics and Business Intelligence Software		
2	Analytics Software for model creation and analysis. Suggested is SAS Analytics	1 copy for production, 1 copy for non-production
2	Enterprise Business Intelligence/Reporting Software. Suggest COGNOS, SAS or similar. Priced is based on COGNOS, BI Administrator, BI Professional and Consumer Modules	1 copy for production, 1 copy for non-production
Imaging Software:		
700 users	Documentum suggested, includes Platform Bundle, Platform Extension, Retention Management, Webtop and Brava	The licenses for Documentum assume State license pricing and include replacement of IDOCS and Imaging software on the current BLS

Table 9-2: Configuration of Hardware and Software Elements

Quantity	Description
	System Hardware
4	BladeCenter H Chassis,14 Blade bays
26	IBM BladeCenter HX5 with MAX5, 4 x Intel® Xeon™ Processor E7-8837 8C 2.67 GHz 256GB
4	42U Enterprise Rack Cabinet
6	IBM BladeCenter HX5, 8 x Intel® Xeon™ Processor E7-8837 8C 2.67 GHz, 1GB Ram
2	BladeCenter H Chassis, 14 Blade bays
40	Dell Precision T1600, Dual Core i3-2100, 3.10 GHz, 3M L3, 1GT, 4GB Desktops w/ Monitor
1	SAN - EMC VNX5500 - 40TB
1	Tape Backup Solution
1	TS3200 Tape Library Model L4U Driveless (4) LTO Ultrium 5 Half High Fibre Drive
32	Windows Server 2008 R2 Enterprise
800	Windows Server 2008 R2 Enterprise CALS
32	Windows Server 2008 R2 Enterprise External Connection
	System and Application Software
1	Integrated Tax System One Time License
1	Internet Taxpayer Service Center License (BLS functionality)
1	vSphere Enterprise Plus Performance Monitoring Software
1	vCenter Server Standard for vSphere
1	up.time Monitoring Station
21	up.time Windows Server License
12	SQL Server 2008 R2 Enterprise, includes:
	SQL Server Integration Services
	SQL Server Reporting Services
1	Symantec Backup Exec Tape Backup Software
1	Tivoli Workload Scheduler
1	NeoLoad 10000 VU Performance Testing SW
6	NeoLoad Monitoring Package
30	Visual Studio 2010 Professional with MSDN Essentials

Quantity	Description
7	Visual Studio 2010 Premium with MSDN
8	Visual Studio 2010 Ultimate with MSDN
7	Visual Studio 2010 Test Professional with MSDN
15	Visual Studio Team Explorer Everywhere 2010
2	Visual Studio Team Foundation Server 2010
30	Visual Studio Team Foundation 2010 CAL
5	Project Professional 2010
40	Office Professional Plus 2010
30	Visio Professional 2010
5	Captivate Training Software (Video Training)
1	Pitney Bowes DOC1 Correspondence Management System, includes:
	DOC1 Designer, Engage1, GeoTAX ETM, UAM, VeriMove, Mailstream, Identity Resolution
2	Help Authoring tool
1	SAS Analytics Framework
1	COGNOS BI Software
1	Documentum Imaging Software, 700 users

10 Impact to DOR

Implementation of the Core Tax and BLS Systems Replacement will impact DOR work processes, where many processes will be changed, eliminated, or reduced significantly. Although all divisions will be impacted, the divisions most impacted by the change are Taxpayer Account Administration (TAA), Taxpayer Services (TPS), Information Services (IS), and Compliance.

Deploying a COTS solution for the Core Tax and BLS Systems Replacement creates a new paradigm for DOR in most business areas, as well as for IS. A COTS solution encapsulates history, background methodology, structure and implied process. These new capabilities and efficiencies provide significant opportunity and advantage for improvement, but require careful transition from the old paradigm. The project should include restructuring of business processes with emphasis on efficiency balanced with adequate internal controls.

Information Services work will shift from emphasis on code development to those with skills who can configure, interface, develop business rules, test and operate the COTS solution. Both the business units and IS, with the help of the COTS vendor, must rethink the way the Agency handles business registration, administers taxes, shares information, and makes improvements to the associated processes. COTS solutions naturally will automate BLS and the core tasks associated with Tax Processing. The new systems will significantly change the way BLS, TAA, Revenue Accounting, Cash Management, Audit and Compliance perform business processes and interact with the systems.

To adopt new tax types or incorporate legislative changes, the features of the COTS solution will need to be leveraged. Business areas and IS will need significant understanding of the architecture and design. New groups will need to be formed as the SMEs for the solution. During the transition, there will be significant pull back to the "old way" of doing things. To successfully achieve the benefits of the new solution, strategic and change leadership must move the organization forward without reverting to past processes just because the Agency may be comfortable with them. Analysis and redefinition of business processes should be encouraged at each Phase of the project, supplemented by professional training and mentoring programs.

Implementation of major system replacements often result in significant organizational changes. It is very common for it to take several months, sometimes years, for the full impacts and workload changes to be realized. This is due to staff learning new skills and processes, and the time for the work procedures to evolve. Processes and procedures may need to be fine-tuned to meet the specific needs of DOR. The new systems will add substantial functionality and information access for the users. The benefits of the systems will be found in improvements to the fundamental business processes, the ability to provide improved service, and increased taxpayer compliance.

Table 10-1 below summarizes the impacts of the Replacement System by DOR Division.

Table 10-1: Impacts of Replacement System by DOR Division

DOR Section	Impact and Work Description
Information Services	• Team structure will move away from the stovepipe legacy system structure, where resources work in specific groups and work is prioritized within those groups, to a more broad-based team that is cross-trained in all aspects of the solution and can work on initiatives prioritized across the Agency. • Teams will move towards a more Agency-centric Data Management Strategy with conceptual and logical data models. Other supporting data facts will include: Semantic Model, Fact Model and/or Enterprise Data Dictionary. • All members of teams will understand the data model and what each area does. Note that certain members of the team will become Subject Matter Experts within their areas. • Members of teams will move towards a more strict governance structure that will guide the Agency through the process of standards alignment. • Communication and expectation setting will need to occur, especially for staff members who are interested in ground up development who may feel like the Agency is moving away from development and towards configuration. • The teams will need to follow strict policy around documenting systems, data flows, and business interdependencies. • New job content will consist of configuring system to meet the specific DOR requirement, maintenance of the system, trouble shooting, preventable maintenance, customization, backup and restore of data, application support, system performance tuning, management of attachments, and interface, application and database maintenance. • As the implementation rolls out, the role of testers increases significantly. A dedicated test team is suggested. • Security administration's job consists of creation of user logins, setting access privileges, resetting passwords, disabling user accounts, creating temporary accounts and configuring roles. • The Department will also be tasked with maintaining the legacy systems and coordinating business rules across both solutions during the project. • Reports and Statistics – The new system provides reports and statistics; IS will not need to create a great deal of ad hoc reports for the Partners. Business managers and supervisors should be able to create their own ad hoc reports from the new system or use extensive new query capabilities, leveraging the integrated agency data model.

DOR Section	Impact and Work Description
General – Business Impact	• Staff will change the way they perform their work. This change will vary based on the specific solution, level of customization, and willingness to change business processes. • Staff will need to learn the application, new concepts, and potentially new terminology. • Further automation of business rules should provide lower levels of EOB queues and potentially change the way users access their work. • The systems replacement will remove the need for users to access multiple systems to research an account. • There will be one location and system of record when it comes to taxpayer entity information, taxpayer accounting, business licensing, and correspondence. • Users will benefit from a consolidated view of the taxpayer, related case notes, and a simplified work list or work queue. • The system will reduce the number of manual steps needed to process a return and apply a credit or a payment. • There will be a learning curve for users to come up to speed on the new solution. • The system replacement will decrease the amount of time it takes for a user to learn the system, provide online help for users, and remove having to teach users workarounds and manage content outside of the system.
Taxpayer Services Division	• Reduce number of taxpayer inquiries. • Reduce time to provide taxpayers with accurate, consolidated view of their account. • Discontinue most of the data entry as information is keyed by the business owner and validated by the system. • Staff will no longer add codes; the system assigns codes based on information submitted by the business owner. • Reducing paper BLAs and renewals as well as the improved application wizard will ensure accurate, acceptable information is received, which eliminates the need for frequent requests for information and phone support. • There will be fewer requests for payment due to a decrease in the number of paper renewals and BLAs. Online transactions correctly determine which licenses are required, calculate the amount due, and require full payment. Training new staff will be faster and easier as there are no codes to memorize or decisions regarding workflow for specific changes. • Additionally, newly hired staff will be more experienced in the web-based technologies than the older, mainframe type interfaces – thus, training time will be shorter. • Work in the new system will be accessed and conducted in the BLS workspace and on the Internet. • The volume of paper documents, while they may not be eliminated, will be greatly reduced. • Future work will consist of error and exception processing and working directly with business users for Registration, Renewals, and Specialty License units. • Communications with the business owners will be done via email or the online messaging and notification system, with some possible exceptions.

DOR Section	Impact and Work Description
TPS – BLS Registration	• Significant decrease in workload. • Researching and applying the Unified Business Identifier (UBI) to applications will be reduced, as all documents coming through the new system will be associated with a UBI. • Maintenance of accounts will change as business owners use the My Account functionality and the system will validate data entered. This ensures all needed information is obtained to make the update or correction the business owner is requesting. • Job content will consist mostly of error and exception processing and working with the business owners regarding specific questions on their accounts. • A small number of paper BLAs, renewals and changes may still be accepted and need to be processed by BLS staff, through the Internet workspace. • Business rules will be managed by the users, with assistance from IS.
TPS – BLS Renewals	• Significant decrease in workload. • Notices to business owners are electronic, with approved exceptions. • Most renewals will be done online by the business owner. • The interview asks questions required to confirm accuracy of current information and obtain any updates as needed. • Registered agents are able to upload information for multiple accounts at once, eliminating these paper renewals. • Job content consists mostly of error, exception processing, and working with the business owner on questions regarding their specific account. • A small number of paper renewals may still be accepted and need to be processed by BLS staff, through the Internet process.
TPS – BLS Specialty License	• Significant decrease in workload. • The number of "pass through" documents is reduced, as hard copies are no longer required, (where approved through policy or law changes) or hard copies still required are sent directly to the appropriate Partner. • Business owners and Registered Agents make updates and changes online. • Miscellaneous money (money that is not reconciled to a UBI/application) is significantly reduced, as money via the Internet has a UBI attached and is connected with an application, renewal or change and validation numbers are no longer needed. • Staff will not have to request a temporary license be printed as business owners can self-print the license from their account. • Front counter BLS workload decreased significantly. • Labor-intensive cash processing is reduced, if not eliminated, as the internet transactions require payment in full. • Job content consists mostly of error and exception processing and working with the business owner on questions regarding their specific account. • A small number of paper BLAs and renewals may still be accepted and need to be processed by BLS staff, through the Internet process.

DOR Section	Impact and Work Description
TPS – Partnership Services	• Increase in workload with additional Partners, coordinating educational information and help text for new system. Duties will include system configuration for new Partners and license types. • Decrease in work effort for on-boarding new Partners with streamlined conversion process and reduction in time spent cleaning up and converting data through a data-matching tool. • Eliminate need for staff to determine which of the Partners accounts need BLS license as all business rules are incorporated into the new system. • Validations in the new system will help ensure data is more accurate and reduce staff time resolving conflicts during on-boarding. • Duties will include configuring the system to set up new Partners and tax types. • Duties will also include content management to make information easily available to the end user such as publications, targeted announcements, wikis, Frequently Asked Questions, online tutorials, and upcoming seminars.
TPS – Call Center	• Fewer calls due to improved information available online, improved help text and educational tutorial but this decrease is offset with more users online and more Partners. • Improved tools used for tracking calls. • Sending paper information and forms to the taxpayer is reduced if not eliminated as businesses are referred to online location to access needed information and forms. • Work effort is reduced as views for Partners and users are similar and constant. Information regarding the system is available to Call Center staff, so they understand the user's issues. • Standard responses are documented in system. • The subject of the questions coming in changes as some functions, such as requests for information are reduced or eliminated, and there will be new functions, such as changes and maintenance done online.
TAA – Business Registration	• Decrease in workload. • Users access and perform work on Partner internet workspace, which streamlines the assignment of accounts. • The UBI is assigned in real-time, which reduces duplicate accounts and multiple UBIs. These are further reduced with the wizard interview, which determines if the business has registered with SOS through questions and online validations. • Staff no longer has to assign codes, such as NAICS, or the filing frequency code, as the system does this with the information provided by the business owner. • Changes made by business owners are online through the My Account functionality and information is directed to the Partners for updating their systems real-time. • Changes from Partners are validated by the system; if the change has been made on BLS, it is ignored, if it has not been made it is verified and added to the Partner information.

DOR Section	Impact and Work Description
TAA – Image Capture and Processing	• There will be a significant reduction in paper BLAs, renewals and changes. • There will be a reduction in paper inquiries for core tax issues, as taxpayers are provided more self-service options on the My Account space. • The need to respond to requests from business owners for copies of documents will diminish overtime, as more and more documents are available online. • The imaging system and procedures for document capture are streamlined and modernized. Any BLS paper documents received will now be able to be imaged using the same system as the DOR documents, as there is no longer a need for the application ID number, which requires the special processing. • The job functions of sorting; preparing batches, scanning, and quality control will remain basically the same, with new efficiencies and improved quality. • The volume of BLS WALI requests decreases significantly as business owners are directed to online information via the system and staff.
TAA – Taxpayer Accounting	• There is a moderate decrease in core tax workload. • Taxpayer accounting will become more consistent, automated, and easier for staff to address as the system will provide for improved taxpayer accounting capabilities. • Staff will have access to a detailed account history online with the ability to print that account history for the taxpayer that shows a simple and concise accounting of all financial activity on that account. • Error and Out-of-Balance (EOB) workload and manual reconciliation are reduced. • Trust Fund Assessments will be more automated and remove the need to work offline. • Taxpayer Account reconciliation will be more automated by removing the need to work offline. • Staff will have access to enterprise wide services, such as correspondence and a holistic view of taxpayer/business information, which decreases training time and increases efficiencies. • There will be more time available to provide improved customer service, assist taxpayers, and perform higher-level tax accounting functions. • Business rules will be managed more consistently and in most cases by the business user, with assistance from IS. • There is detailed traceability, down to the financial transaction level. • Data fixes by IS should be minimal or non-existent.
Audit Division	• Increased efficiencies and better Analytic tools will result in additional revenue benefits. • Access to taxpayer information for Audit purposes will be improved through greater consolidation of information and matching to an Entity level. • Identifying, assigning, and tracking of audits will be more automated, centralized, and consistent. • The ARS database will be replaced with a COTS system and a robust case management system will be implemented.

DOR Section	Impact and Work Description
Compliance Division	• Increased efficiencies result in additional revenue benefits. • Robust Case Management functionality is added. • Manual generation of correspondence will be greatly reduced, if not eliminated. • The function of assigning work will be simplified and faster. • Improved analytical approaches to prioritizing cases and assessing risks will increases Compliance revenues. • Front Counter Staff in Field Offices – Significant decrease in cash receipting duties. There will be less cash receipting as staff direct business owners to use computers in the lobbies for all transactions. Tax work is faster and therefore reduced, as balances are accurate and available.
B & FS – Cash Management	• Significant decrease in BLS workload processing paper checks due to increased online transactions, which increases ACH, e-checks and credit card transactions. • Elimination of the validation number practice, which will streamline the processing for the remaining paper checks accepted by BLS. These may be processed similar to checks received for the other tax programs. • Electronic receipt of tax information directly into the Cash Receipts Reporting System (CRRS) will eliminate the manual process of posting from paper reports and improve accuracy and internal controls by reducing opportunities for recording errors. • The need for the lockbox for BLS renewals may be eliminated as the volume of paper transactions decreases. • Transactions will be traceable directly into the accounting records on a real-time basis and eliminate front funding of specific taxes. • Reconciliation will be streamlined as a function of the BLS system, and the BLS Cash Management process can be integrated with the other tax processes. • Credit Card Charge-Backs / Fraud / ACH / e-checks / NSF processes should remain the same, though there should be a significant increase in the volume of these for BLS. • Reduced effort to process receipts currently based on paper production control reports.

DOR Section	Impact and Work Description
B & FS – Revenue Accounting	• Significant decrease in manual workload as the work process changes to adapt to the COTS solution. Examples of work process that will be significantly changed or eliminated are the twice-monthly revenue allocation and the work done to produce the Monthly Revenue Activity report. These changes will increase efficiency and improve accuracy. • Tax transactions will be traceable directly into the accounting records on a real-time basis. • Internal controls will be improved by reducing the number of manual processes (for example: Revenue Act allocations). • Accounts Receivable balances will no longer need to be estimated but will be based on transactional activity. • The volume of BLS refunds is reduced with the increase in online transactions, which properly calculate the amount due (as opposed to paper BLAs where the business owner calculates the amount due and may overpay).The remaining refunds will not require the manual data entry of the business owner's name and address. • The new system will provide the information Revenue Accounting needs in the format that is integrated in the COTS solution, thus eliminating the need for staff to manipulate, reconcile and present information in spreadsheets. • The BLS quarterly billing process is reduced to credit card charges only. • The method of distributing funds to the different Partners and agencies that administer accounts that DOR transacts revenues with should not change, but the reports provided to Revenue Accounting identifying the amounts should be more streamlined and eliminate the need to manipulate the data in a spreadsheet. The reports can be designed to provide the information in the format they need to distribute the funds appropriately. • The new system will provide the information Revenue Accounting needs in the format needed to allocate funds to the BLS Partners in a more efficient manner. • The processes for BLS are seamless with the processes for the other tax programs. • Accounts receivable balances will no longer need to be estimated but will be based on transactional activity.
Support Service – Correspondence	• The new Correspondence Management solution will provide efficiencies, makes maintaining and managing correspondence easier and more efficient. • All correspondence is created, maintained, and managed in a consistent manner.
Support Service – Business Rules	• The consolidated Business Rules Management solution will relieve IS from maintaining business rules in codes tables or in application code. However, IS will provide support for rules authoring, testing and support. • During the project, Support Services will need to continue to maintain business rules.
Support Service – Workflow	• Workflows will be consolidated across all areas of the business process. • IS will be relieved of some of the maintenance associated with Workflow as workflows are extrapolated and managed in a central location and a single set of tools.

11 Impact to External Stakeholders

External stakeholders will be impacted positively with improved customer service and systems that are easier to use. For business owners and taxpayers, information will be more accurate and easier to understand. Most importantly for businesses, all applications will be accessed from one central portal (e.g., My Account), thus streamlining the user experience. Other stakeholders who require DOR information via data exchanges will have the ability to log in and obtain the information they need when they need it. Note: while the Statewide MyAccount (WA Business One-Stop) project is a separate initiative, the COTS Core Tax and BLS Systems Replacement future solution will need to integrate its taxpayer portal capabilities with the Statewide MyAccount.

The stakeholder access layer in the new system is the mechanism through which a stakeholder has access to information and performs activities. Most often, this will be through a web-based portal or direct interfaces for exchanging data.

Stakeholders will access the new Core Tax and BLS System for various reasons:

- Taxpayer: Register a business, file a return, and access "My Account" information.
- State Agencies: Exchange data files, look up a business, and approve transactions.
- Local Governments: Exchange data files, look up a business, and approve transactions.

Impact to Businesses

Businesses will receive answers much quicker in the new system and as a result, taxpayer inquiries in the form of phone calls or letters will decrease. In addition, information will be more accurate as it will be pulling from a common, centralized system of record. Businesses will have an advanced portal to do all of their tax business, registration and account maintenance. The My Account functionality will be expanded to provide one portal with access to both tax and registration data.

The impact to the business community will include a one-stop self-service capability, with the following functionality:

- A Consolidated Statement of Account.
- The ability to file and amend returns.
- The ability to send secure electronic messages.
- An increased integrity of account information provided without delay.
- The ability to enter into an Electronic Partial Payment Agreement (EPPA) online.
- An improved front counter experience (e.g., consolidated view of an account can enable better service for the taxpayer at the point they request).
- With permissions and controls, the ability by the taxpayer or their agent to update their Tax account or licensing information online.
- The capability for more businesses to register their business and renew their business licenses online.
- An easier method to complete online information, with the ability to upload any required back up documentation.
- Access to notices and messages about an account online, which eliminates issues with businesses not receiving mailed paper notices.
- Capability to add business locations without requiring the completion of an entire Business License Application (BLA).

- The ability for business owners to confirm that the information in the system is current and accurate, make any appropriate updates, and pay new location fees online. The same process will be available for renewals, which will make these routine processes faster for business owners, DOR staff and Partner agencies.
- Resolution to the current issue of time delay in receiving paper license. This will be accomplished by the capability of printing the license from the account's workspace. For most business owners, all functions are envisioned to be self-service, putting the business owner in control and conducting business with the Agency when it is convenient for them.
- An easier understanding of the registration process and license obligations because of the educational information and "Wizard-like" interface available in the new system. Businesses will be able to complete their transactions faster, easier, and more accurately with the new online approaches.

Impact to Partners

The anticipated positive impacts to BLS Partner Agencies are as follows:

- Partners will change how they electronically receive BLS data and how they provide electronic updates and approval notifications back to the BLS system. The result of these changes will be streamlining of work processes.
- New electronic interfaces, based on current industry standards such as Web Services, will be more consistent and much easier to maintain.
- Screens used by Partners to access BLS data will be more user-friendly and easier to read.
- Partner users will have a workspace available to conduct all of their BLS functions online. Currently, some Partners have difficulty understanding and remembering system codes. The future system will eliminate confusing codes and replace them with descriptions easily understood by the casual user. This will make training new staff on the BLS processes easier for the Partners as well as DOR's BLS staff.
- By providing change and update functions that are easily understood, Partners can eliminate the process of printing out the change notices and manually working them. Updating the BLS system with the final Partner approval is simplified and makes Partners more efficient.
- The Logon process will be less cumbersome and encourage more flexibility in accessing BLS accounts. Currently, many Partners comment that they try to avoid using the BLS system because of the difficulty logging on. In many Partner organizations, access is confined to one or two individuals because of the difficulty or limitations with the current system.
- Management information in the form of online queries will be more readily available to Partners. Currently, reports are mostly printed, which are costly and prohibits Partners from obtaining timely information that should be readily available through a BLS system screen.
- Information to Partners to help manage their business is now provided on a quarterly basis. Partner's compliance efforts will be improved because they will have the online, real-time information they need to complete a license and/or registration without delay.
- The ability for Partners to reprint different notices on-demand will be supported. This capability will provide quicker service for business owners when they do not receive mailed correspondence or as a follow-up tool for Partners when working delinquencies. The goal will be to provide many on-demand, self-service functions to the business owner. This will eliminate cumbersome follow-up, phone calls, faxes and unnecessary delays.
- The goal will be for the end-user to have fewer questions working through the BLS process and not need to call for assistance from Partners for routine questions.

12 Business and Technical Staff Training

Training is an essential ingredient to providing people with the tools and confidence they need to use the new systems. The vendor should provide DOR with support, mentorship and tools staff need to be successful. Employees learn new skills in the classroom and apply them to do their jobs. However, DOR will also need to make a concerted effort to retrain employees in the skills they will need to support their new job functions.

A training approach should be built upon a foundation of six core components.

- Train-the-trainer.
- Customized Classroom training.
- Online training or WebEx.
- On-the-job training.
- Mentorship.
- Self-Help Tools such as role specific Job Aids and Context Sensitive Online Help.

Training is just one part of an organizational change management strategy. Communication should begin well before the first production launch. Sharing information helps employees prepare for the changes a new system represents and reduces uncertainty.

Training Approach

Ultimately, the project is a success when staff has accepted the new systems and are able to produce results. Training of personnel really begins on the first day of the project. Knowledge transfer starts with the staff dedicated to the project team. It is here that day-to-day mentorship on functional and technical aspects of the system components occurs. DOR will realize the maximum benefit of this approach if team members are full-time and dedicated for the duration of the project.

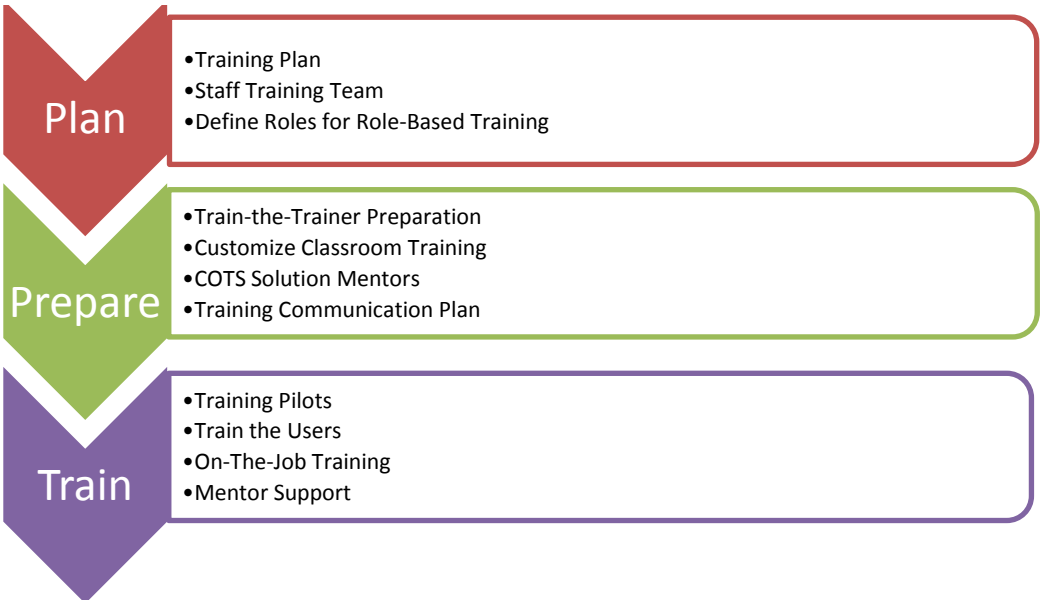

Figure 12-1: Recommended Training Approach

To manage knowledge transfer, a Training Plan should be developed early in the project during the design Phase. The Training Plan defines the training objectives of the project and how they will be achieved through Train-the-Trainer instruction, Instructor Led Training, On-The-Job and job aides. Each audience, Business Users, Developers and System Administrators, will have training delivered in modes that are most appropriate for their job functions. The Training Plan includes an inventory of the site-specific materials to be developed, locations for training, and delivery schedule.

Train-the-Trainer

Train-the-Trainer approach for end-user classroom training is a recommended best practice. Developing DOR trainers to deliver training is another way of helping DOR to be self-sufficient.

Train-the-Trainer candidates should be selected by the DOR and assigned to the project team. They will take part in customizing the training materials with site-specific content, such as policies and procedures and modifying the existing hands-on exercises to tailor them for DOR.

Customized Classroom Training

The vendor and DOR will develop a training curriculum for end users and IS. The classroom training starts by building a foundation of core skills before moving on to advanced topics. The training classes should be designed to include using DOR tax forms, policy statements and procedures.

The content is defined in the training plan developed as part of the train-the-trainer training. This hands-on experience helps the trainers become familiar with the content of the courses and helps them take ownership of the training curriculum.

Mentors

Mentors provide on-the-job support and are champions of the new systems. Mentors will be selected by DOR to be leaders in adopting the new system and act as role models across the Agency. Usually a mentor or two are selected from within each business area. Mentors provide two functions. They help people apply what they learned in training and they provide feedback to the project team on any issues or concerns that users may have. This allows for informal feedback to the project that might have otherwise been unheard. Issues identified can then be managed and addressed proactively such as adjusting future training sessions, providing more support materials, or additional training.

Train the Users

DOR Trainers deliver classroom training with technical and functional support from the vendor team. The scheduling and location of training sessions is defined in the training plan. Users will attend courses that introduce the new system and build basic skills first. Role specific training will teach the advanced skills individuals will need to perform their job functions.

Trainees will receive handouts and job aids as part of each course to take with them. Training continues with on-the-job training and mentorship by Mentors.

Users are further supported with context sensitive online help. Help text is customized by DOR to communicate policy and procedure.

Training Technologists

Technical training is needed for both Operational and Development groups. Operational training covers how to maintain the technical architecture and systems. Development training helps developers build the technical skills they need to maintain the business rules and technical environment.

Continuous Improvement

Training courses that have been customized can be validated using training pilot sessions. Classroom training concludes with a training room survey. The training team reviews the survey results to evaluate training performance and identify areas of improvement. Corrections can be made to materials as warranted. Feedback does not end once the class concludes. Additional feedback is gathered after the training has concluded as people apply what they have learned to successfully do their jobs.

Training Assumptions

The objectives of attending training is to develop skills and expertise to implement the new system and for end users to work within the new system. Students should already know how to perform their jobs to get the most benefit from the classroom sessions.

Business attendees should already be knowledgeable about DOR policies and procedures.

Attendees need to be able to use a computer, be familiar with the operating system in use at DOR, and have a working knowledge of using a web browser, and Microsoft Office programs, such as Word, Excel and Outlook.

Technology training will build upon an existing understanding of common technology concepts such as relational databases, Microsoft Windows Server 2000, .NET, etc.

DOR Training Needs

The Core Tax and BLS Systems Replacement Project will have major training impacts on DOR. Along with the technical training required to maintain the system and work with the new processes and procedures, there are "non-technical" training needs as well. Table 12-1 below describes the specific DOR training needs, by DOR work unit or Division.

Table 12-1: DOR Training Needs

Organization	Training Needs
Project Management Training	Project Management training for functional and technical managers on how to manage resources, project timelines, tasks, and deliverables. Topics include: • Project Management, Control and Execution • Project Organization & Staff Management • Task Management • Issue Resolution • Change (Scope) Control • Quality Management & Deliverable Review • Risk Mitigation • Communication Strategy • Industry-Proven Best Practices
Information Services	Training and skills required to maintain and support the new applications. Training in functional capabilities and basic operation, trouble shooting, preventable maintenance, customization, creation of user logins, setting access privileges, backup and restore of data, database administration, application maintenance, system performance tuning, interface maintenance, and application support. • Training to maintain and configure the portal; portal best practices. • .Net platform and development training. • Configuration maintenance training. • Enterprise Architecture training. • Web development training. • General introduction to Service Oriented Architecture. • General introduction to Web Services. Key Technical Leads – IT Governance training and vendor management. Training or specific transformation processes to increase strategic skill sets related to large-scale system replacements. IT Executives – Presentation on Governance. Project Management Office – Project Management training.

Organization	Training Needs
TPS – BLS – Registration	Project Managers – Training on BLS Portal management best practices and training on tools related to profiles, management reports, reassignment, workflow/work list, dashboards and thresholds. Business Rule Manager Specialist – Business Rule Configuration and Management training. Business Trainers – Train-the-Trainer training. All Users • Overview / high-level summary that describes basic features of the new system, navigating through the system, and how to get help. • Business User Training consisting of overview of Wizard, workflow, views, and the basic functionality of the system – how to use the system for day-to-day processes.
TPS – BLS – Renewals	Project Managers – Training on BLS Portal management best practices and training on tools related to profiles, management reports, reassignment, workflow/work list, dashboards and thresholds. Business Trainers – Train-the-Trainer training. All Users • Overview / high-level summary that describes basic features of the new system, navigating through the system, and how to get help. • Business User Training consisting of overview of Wizard, workflow, views, and the basic functionality of the system – how to use the system for day-to-day processes.
TPS – BLS Specialty License	Project Managers – Training on BLS Portal management best practices and training on tools related to profiles, management reports, reassignment, workflow/work list, dashboards and thresholds. Business Trainers – Train-the-Trainer training. All Users • Overview / high-level summary that describes basic features of the new system, navigating through the system, and how to get help. • Business User Training consisting of overview of Wizard, workflow, views, and the basic functionality of the system – how to use the system for day-to-day processes.
TPS – BLS Partnership Services	Training on BLS portal management best practices and training on tools related to profiles, management reports, reassignment, workflow/work list, dashboards and thresholds. Training on Data matching tool and setting up new Partners. Business Trainers – Train-the-Trainer training. Basic Training consisting of overview of Wizard, workflow, views, and basic functionality of the system – how to use the system for day-to-day processes, navigating through the system, and how to get help.

Organization	Training Needs
TPS – TIC – Call Center	Business Trainers – Train-the-Trainer training. Training on Call Center knowledge base system and on tracking system. Basic training consisting of Wizard, workflow, views, receipting, functionality of the system, navigating through the system, and how to get help.
TAA	Business Trainers – Train-the-Trainer training. New skills and training including technical functionality, system navigation, work queues access, generating correspondence, making adjustments, and other system capabilities. Training to address skills gap of dealing with error processing to tax accounting and customer service.
TAA – Business Registration	Registration Users – Basic training consisting of Wizard, workflow, views, receipting, basic functionality of how to use the system for day-to-day work.
Audit	Business Trainers – Train-the-Trainer training. New skills and training including technical functionality, system navigation, work queues access and system capabilities.
Compliance	Business Trainers – Train-the-Trainer training. New skills and training including technical functionality, system navigation, work queues access and system capabilities.
B&FS – Revenue Accounting	Training on the COTS applications financial reporting capabilities for items such as revenues, credits, accounts receivable details, distribution processes, distributions, system reports, and accessing data related to distribution of funds. A short overview of the new system that describes basic features of the system could be helpful to promote awareness and understanding throughout DOR. Understanding of interfaces of the Core Tax / BLS system to external applications (e.g., AFRS, Treasury Management System)
B&FS – Cash Management	Training on the COTS application functionality related to cash receipting for electronic and paper checks, reporting for use in deposits, reconciliations, etc. A short session to discuss the changes and an overview of the new system that describes basic features would be helpful to promote awareness and understanding throughout DOR. Understanding of interfaces of the Core Tax / BLS system to external applications (e.g., AFRS, Treasury Management System)

13 Risks and Mitigation

Risk management is an essential part of any major project. Risk management prepares the organization to deal with uncertain project events in a proactive manner. The result will be minimizing the impact of project threats and seizing the opportunities that occur. This enables DOR to deliver the project on-time, on-budget and with the quality results the project sponsor demands. In addition, team members and others with a stake in the project will view the project as much more of a success if constant "fire-fighting" can be avoided.

Below are risks that have been identified by DOR as part of the alternatives analysis and suggested mitigation strategies.

Table 13-1: Project Risks and Recommended Mitigation Strategies

#	Risks and Impacts	Severity	Probability	Mitigation Strategies
CTS001	**Vendor project roles staffed with junior staff**. This may also impact the project schedule.	M	L	Ensure commitment of outside experts, even if on a part-time basis. Write caveats into the contract to discourage changes in vendor key staff members.
CTS003	**Product –** Selected software does not meet complete functional needs of Agency or is not flexible enough for Agency future needs.	H	L	Ensure procurement process engages a proven product that is scalable and flexible. Conduct a thorough proof of concept as part of the project.
CTS004	**Data Mapping –** Legacy systems data is overly complex and needs cleansing prior to mapping or adds significant rework in order to map to COTS data model.	M	M	Ensure schedule has adequate time for conversion tasks. Ensure an Enterprise Architecture and an Implementation Strategy are developed early on in the project. Leverage the industry proven best practices and tools for data cleansing.
CTS006	**No control of system –** Software requires on-going, long-term, costly, and specialized vendor support to make any changes.	H	L	Ensure procurement process assesses the vendor's responsiveness to support needs and communications with clients.
CTS008	**Software Providers –** Software provider(s) does not commit to level of functionality promised by Systems Integrator.	H	M	Closely monitor the Requirements matrix and addresses issues with vendor as they arise.

#	Risks and Impacts	Severity	Probability	Mitigation Strategies
				Put in place a repeatable process with an audit trail of how the vendor will meet the requirement.
CTS009	**Project Complexity –** The project complexity presents challenges and issues for project management that threaten the completion of the project.	H	M	Use best practices and experience from previous implementations. Engage a proven team that has implemented projects with similar complexity.
CTS010	**BLS and Core Tax Integration –** The project has difficulties integrating between BLS and Core Tax where the two have significant impact on the same legacy systems (e.g., BRMS).	M	M	Ensure open communications between the Core Tax and BLS Systems Replacement Teams during the overlap between phases. Do not begin work until detailed data architecture has been designed and agreed to by all parties.
CTS011	**New Requirements –** The Legislature passes new legislation requiring changes to the core taxes or licensing process.	L	L	Monitor proposed legislation and provide input as appropriate. Ensure procurement process engages a proven product that is scalable and flexible. Conduct a thorough proof of concept as part of the project.
CTS012	**Software Support –** The software provider ceases to provide support for software components.	H	M	Ensure procurement process evaluates the stability of the company.
CTS013	**Missed Implementation Targets –** The project fails to implement a tangible component within the first biennium.	H	M	Ensure open communications. Closely monitor project schedule and address issues as they arise through the formal Issue Resolution process. Use the project plan and schedule to manage resources and identify conflicts.

#	Risks and Impacts	Severity	Probability	Mitigation Strategies
CTS014	**Funding Availability –** Funding is either not supported to start or is removed mid-project.	H	M	Ensure all project costs and schedule documentation is up to date and well supported. Include alternatives (such as full or partial benefits-funding) and alternative implementation plans if full funding is not provided initially.
PM001	**Poorly defined requirements –** Requirements can be insufficiently designed, too narrow, unclear, and/or based on current processes instead of more efficient ones. This can result in difficulties selecting a vendor, inability to hold vendors responsible for system functionality, and a system not meeting stakeholders' needs.	H	M	Identify business owners who will be responsible for driving the requirements. Define requirements in appropriate detail and map requirements to key business objectives. Leverage experiences from other states. Establish clear expectations within the Agency, with Partners, with vendors and with users.
PM002	**New technology is not proven in the proposed environment –** This can result in unexpected issues when the technology is executed, in terms of performance, infrastructure, usability and delivery.	M	L	Conduct a thorough proof of concept as part of the project. Establish key checkpoints to assess status. Leverage industry leading practices and proven technologies.
PM003	**Scope creep –** While every project will require some changes over the course of design and development, the risk is that too many changes are made, impacting product integrity, conversion, testing and overall delivery.	M	H	Assess effect of changes to planned scope and quantify with a view on the conversion effort. Employ a rigorous change control process, including the appropriate deferment of non-essential scope. Expect change to happen and plan for a reasonable contingency. Utilize an active and engaged Executive Steering Committee to oversee

#	Risks and Impacts	Severity	Probability	Mitigation Strategies
				changes to scope (i.e., project change requests).
PM004	**Level and approach to conversion addressed late in the project –** The risk is that data issues that should have been addressed early in a project are not addressed or discovered until the project end stages, causing unnecessary delays.	M	H	Confirm conversion approach very early in project. Convert a summary level of data that has reference points to search for additional elements. Clean data up front rather than leaving conversion issues later in project. Include designs and testing for performance in the technical architecture.
PM005	**Architectural detail is insufficient for the solution –** This could cause cost overruns and additional training and staffing requirements.	M	M	Use best practices and experience from previous implementations. Engage a proven team that has implemented architectures with similar complexity.
PM006	**Testing limitations –** The plan for testing is inadequate for the scale of the project and complexity of the solution. The test plan does not include thorough testing on integration points with other systems, both internal and external. If the testing plan is insufficient, Core Tax will be dealing with the undiscovered defects late in development, or well into production.	H	M	Involve testing early in the process. Schedule interface testing earlier in the process to shake out some of the defects. Allow for appropriate testing times during each Phase of the project.
PM007	**Project implementation milestones are too big, too complex, and too far apart on the schedule –** This allows the project to proceed too far and potentially in the wrong direction, without confirmation. Delays could also affect cost and schedule momentum or dilute excitement.	M	L	Use an iterative development approach. Plan and deliver the application and processes in a logical order, and build from the foundation upward. Establish early "quick win" initiatives to deliver early benefits and get some successes associated with the project.

#	Risks and Impacts	Severity	Probability	Mitigation Strategies
				Break the delivery of the project into smaller, clearly defined phases.
PM008	**Project work plan becomes out of date after project launch –** This may cause substantial re-work in the project timeframe, impacting scheduling, staff and infrastructure.	M	L	Define and adhere to a scope control and change process. Actively manage risks. Act on lessons from proof of concept and early iterations of new components. Proactively manage plan Good
PM009	**System design changes not tied to a specific business need –** This risk can result in expansion of scope and a system that no longer aligns with the state business needs and processes. These changes can unnecessarily derail a project timeline.	M	L	Invoke the established change control process with a firm business need criteria. Even if the changes are agreed to by the stakeholders, project management must make and deliver a clear assessment of the impact.
PM010	**Project readiness –** This risk is that Core Tax and BLS staff are not prepared to manage the project from procurement through development and implementation. Appropriate resources, including staffing and infrastructure needed for the project are not in place according to the schedule.	H	M	Ensure project plan identifies early on infrastructure requirements for development, test and production. Establish the infrastructure early, including project communication channels, work repositories, configuration management, etc. Identify the key staff vs. support staff that will help drive the project and ensure that existing roles are backfilled with new or existing staff so that DOR project staff does not get pulled back into their old role.
PM011	**Dedicated DOR project staff is not identified –** This includes staff not being identified up front, or staff not being dedicated to the project full time and being	M	L	Identify dedicated and committed staff for all roles of project. Break the project up into manageable phases and scale

#	Risks and Impacts	Severity	Probability	Mitigation Strategies
	distracted by their 'day jobs'. The project schedule can be severely delayed if the staff is not available to perform their roles.			it to a level such that the Agency can provide the appropriate staff. Include funding for hiring staff to backfill for business area subject matter experts.
PM012	**Project staff is not performing at a level of productivity expected and assumed in the work estimates –** This applies to both Core Tax/BLS staff and the staff supplied by the vendor. The project schedule can be also severely delayed if the staff is unable to perform their roles. Note that this risk needs to be addressed at different stages of the project, when different skill sets are needed.	M	L	Implement robust training programs to help staff develop the appropriate skill sets. Include 'just-in-time training' to address needs as the project evolves (for example, design skills may be needed earlier in the project, testing skills later). Hire contractors if necessary to address specific project needs that may not be required long term. Implement productivity tools to improve communication and increase re-use of existing materials.
PM013	**Subject matter experts are part-time or unavailable –** This may also impact the project schedule.	M	M	Do not skimp on project support staff (to reduce time wasted on administrative tasks). Include funding for business areas to backfill to allow their staff to serve as subject matter experts.
PM014	**Change in executive sponsors –** This includes changes in leadership and changes in Agency priorities, which may cause a lack of decision-making at the project level.	M	M	Conduct workshop at the beginning of the project on the role of sponsors and champions in leading the effort. Involve the steering committee in all stages of the project. Arrange for additional Executive staff to keep current on the project status, needs, etc.

#	Risks and Impacts	Severity	Probability	Mitigation Strategies
PM015	**Dedicated staff does not understand their roles or responsibilities clearly –** They may also fail to understand the impact of their role on the success of the project.	M	L	Actively engage key staff to foster understanding and partnership, with a common goal of project success. Define success criteria and measures of quality. Assess organizational and operational readiness for project implementation early in the project. Host a kickoff meeting where key staff is given the opportunity to understand project (or phase) objectives, and their associated roles and responsibilities. Provide mechanism for staff to understand what is occurring with the project for areas other than what they're directly involved in.
PM016	**Project proceeds without a technical architect –** Without someone who owns the technical architecture, decisions may be made that can impact Core Tax/BLS later after implementation.	M	L	Create and communicate the architecture clearly in the relevant dimensions of technology (business components, network, application, database, data model, etc.). Ensure committed time and attention from a technical architect.
PM017	**Competing priorities for focus and resources –** Day-to-day activities, seasonal processes, and other state project priorities present competition for focus and resources.	H	M	Ensure there is strong executive sponsorship and commitment by project participants. Address competing priorities early in the project.
PM018	**Project Financials –** The risk is that project benefits are insufficient to fund the project.	M	L	State in contract to conduct frequent checkpoints/milestones. Have a contingency plan in place to allow staff be shifted to benefits generating activities if needed. Ensure benefit estimates are

#	Risks and Impacts	Severity	Probability	Mitigation Strategies
				accurate for timing and amount. Fund project through other means such as direct appropriations or financing.
PM019	**Bargaining Impacts –** Timeline for union to consider demands to bargain and subsequent bargaining sessions may affect project progress.	L	L	Designate Unions as one of the stakeholders in the Communications Plan. Work with leaders, including the Human Resources Labor Relations Manager, to address union concerns early in the process as part of stakeholder management.
PM020	**Lack of honest and timely communications –** This can include how project information is disseminated internally within the Agency. It also includes communicating effectively to key external stakeholders, like the Legislature, so that there are no surprises or miscommunication.	M	L	Prepare a Communications Plan at the beginning of the project and ensure it is implemented. Communicate early and often. Promote inbound communications.
PM021	**Integration of infrastructure with state data center –** This could impact not only project scheduling, but also implementations occurring at other state agencies.	H	L	Ensure open communication channels with external groups that may need to coordinate similar development efforts. Ensure that any state mandates with respect to technology are incorporated into design and development.
PM022	**Organizational Change Readiness –** is not aligned with the process and system changes associated with the project. This can result in delays in system and process acceptance and an initial decrease in operational efficiencies.	M	L	Prepare an Organizational Change Management Plan at the beginning of the project and ensure it is implemented. Include the Human Resources Labor Relations Manager as needed for impacts with represented employees. Conducting change readiness surveys; ensure large-scale staff involvement in the

#	Risks and Impacts	Severity	Probability	Mitigation Strategies
				effort, open and frequent communications, and organizational design efforts.
PM023	**Team Experience –** Vendor lacks tax or business licensing knowledgeable, seasoned staff.	H	L	Ensure the procurement process assesses the vendor's tax and business licensing knowledge and staff experience.
PM024	**Project Approach –** Vendor lacks proven methodology, work plan, comprehensive training and proven change management plan.	M	L	Ensure the procurement process assesses the vendor's skills and experience in these areas. Use the Implementation Roadmap as a guide to project approach.
PM025	**Agency Adoption –** Agency is slow to adopt the new systems.	M	L	Prepare and implement an Organizational Change Management plan. Ensure issues are addressed in the Communications plan and two-way communications is encouraged. Develop and implement Training plan.
PM026	**Legislative Changes –** New legislation enacted during implementation may require significant changes to system business rules.	H	H	Monitor proposed legislation and provide input as appropriate. Ensure procurement process engages a proven product that is scalable and flexible. Conduct a thorough proof of concept as part of the project.
PM027	**Data Quality –** legacy data to be converted has significant quality issues.	M	M	Ensure schedule has adequate time for conversion tasks. Leverage the industry proven best practices and tools for data cleansing.
PM028	**Vendor –** Does not commit to level of resources promised by Systems Integrator.	M	L	Closely monitor the project plan and addresses issues with vendor as they arise.

14 Exceptions to OCIO Policies or Technical Standards

At this time, there are no exceptions that should be taken as it relates to OCIO policies or technical standards. Given the COTS decision of the project, a few considerations should be included in the procurement process. DOR should ask vendors to review the OCIO policies and technical standards and determine if exceptions should be taken.

Table 14-1: State/DOR Fit Considerations for COTS Alternative

Standard	Consideration
SQL Server 2008 R2 or above	Most COTS solutions can work from SQL database
.NET 2.0 or above	Yes, COTS applications can be built on the .NET platform, but not all COTS applications are built in .NET or require the customer to modify the base code.
Windows Server 2008 R2 or above	COTS solutions may or may not be built of the MS Windows environment; This will have to be a mandatory requirement to ensure compliance.
Web-based	Yes, COTS applications often leverage web-based interfaces, reporting, performance indicators, but may have an internal application interface for configuration and other controls.
Auditable/ Transaction Based/User Based	Yes, Audit, transaction and user management may vary between COTS components and vendor
MS Office	Yes, COTS solutions often interface to MS Office components; however, COTS solutions often have features that reduce the need for post processing use of MS Office as part of the solutions.
Provides standard API's for integrating with third-party or in-house applications.	Yes, COTS solutions are built with APIs for third-party integration, unless they provide those functions within their solution.

15 Issues to be Addressed Prior to Implementation

The list below represents items or issues that could be addressed prior to project start. Doing so will better position DOR for the project.

Request for Proposal Preparation:

1. Develop and implement Project Management Organization with clear roles, responsibilities, and reporting structure.
2. Inventory existing reports (source data, system, purpose, content, frequency, users).
3. Inventory existing notices & correspondence (source data, system, content, purpose, auto vs. manual).
4. Inventory existing interfaces (source and target systems, content, key business rules, frequency).
5. Identify current Key Performance Indicators (KPIs)/Government Management Accountability and Performance (GMAP) and the DOR Performance Measure Tracking System by business function and document current (baseline) performance.
6. Assess legacy system data and define conversion expectations.
    a. How many years of inactive data?
    b. What history records?
    c. Transaction detail or rolled-up summary?
    d. What case and correspondence information?
    e. Identify (categorically) data clean-up for missing duplicate keys, bad dates, non-numeric, other data purification needs.
7. Harvest/document existing business rules, such as desk manuals and cheat sheets.
8. Start pulling together requirements (business functional areas, business process understanding, technical areas, etc.).
9. Implement strict policy and timing around documenting systems, data flows, business processes and business interdependencies in order to improve timing and confidence level of system changes.
10. Consolidate information and processes, and limit the number of systems that will be impacted by the Core Tax and BLS System replacement where possible.
11. Provide documentation prior to system changes that describe the impact to the business processes as a result of the system changes or maintenance. Document plan for business areas to mitigate significant impacts to business processes.

Documentation:

1. Create and maintain an Agency Data Management Strategy, conceptual data model and logical data models. Other supporting data artifacts that would prove beneficial include Semantic Model, Fact Model and/or Enterprise Data Dictionary.
2. Establish standards and track/monitor compliance. Create a governance mechanism that will guide the Agency through the process of standards alignment.
3. Identify the Agency's disaster recovery or business continuity plan for essential functions and vital services.
4. Define and document internal control concerns and operational risk assessments of all systems across the organization.
5. Adopt a risk assessment process into the lifecycle of new or replacement systems.
6. Gather all currently used macros and determine the purpose and function of each macro. Develop associated requirement as needed to include in future development or procurement efforts.
7. Capture all business requirements associated with Microsoft applications (e.g., Excel, Access, etc.) so that the appropriate requirements are developed for the Core Tax and BLS Systems Replacement Project.

8. Document a thorough inventory of sensitive data. Centralize or secure the most sensitive data and put tracking in place. Model existing data flows and storage for the current state. Create a Data Management strategy that includes data security. Communicate data standards, data security, and the risks associated with data security threats.

Development Process and Training:

1. Leverage the Systems Transformation and Refresh (STAR) Technical Steering Committee to identify and systematically adopt development standards.
2. Create training programs for developers that focus on DOR development standards and/or new technology.

BLS Charges to Partners – Credit card charges and system usage. Some Partners with small programs have stated credit card fees are too high and take too much of their licensing revenue. Moving from paper to internet transactions may increase charges to Partners. DOR needs to review how credit card transaction fees are handled and determine if it is possible, feasible, and reasonable to pass the fee along to business owners. DOR should continue to encourage business owners to use the e-check alternative.

Paper BLAs, Renewals and Changes – How long will paper BLAs, renewals, changes and updates be accepted? Should internet be required unless there is a hardship? BLS needs clear rules as to when it is ok to accept paper. BLS needs to work with Partners, to ensure they can receive any additional documents needed via uploads from the website, or they are sent directly to the Partner. Address any confidentiality issues with all documents being part of the system. Address any issues of requiring original documents; attempt to move away from original copies retained. Legislation supporting electronic filing of documents may be needed.

Expanding My Account Functionality to BLS –Future BLS communications with business owners will be electronic, via email notifications or messages available to business owners on their specific account workspace. BLS needs to assure there are no outstanding concerns regarding these secure messages.

16 Recommended Project Management Best Practices

This section describes the recommended Project Management Best Practices approach for large scale system replacement projects, including project management organization, managing the project, and how to structure the organization after the project is complete. These examples reflect RSI's proprietary methodology, and have been custom-tailored by RSI to fit the specific challenges and idiosyncrasies of large-scale change initiatives in a state tax organization. They may be used by the DOR, but we ask that they be redacted from publication or use of the document(s) outside the DOR. The Project Management overview is presented in the following sections:

- Project Management, Control and Execution.
- Project Organization & Staff Management.
- Project Management Office (PMO), Process & Organization.
- Task Management.
- Issue Resolution.
- Change (Scope) Control.
- Quality Management & Deliverable Review.
- Risk Mitigation.
- Communication Strategy.
- Industry-Proven Best Practices.
- Alignment with Project Management Body of Knowledge (PMBOK).
- Alignment with Capability Maturity Model Integration (CMMI).

As requested sections 16.1 through 16.11 have been removed from this public version of the document.

Appendixes A and B were also removed.